



COUNTY BOROUGH OF BIRKENHEAD.



ANNUAL REPORT  
OF THE  
MEDICAL OFFICER  
FOR  
1919.

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O. MORLEY MATHIESON, M.A., M.D. (Edin.), Ch.B., D.P.H.,

Medical Officer of Health, and  
Principal Medical Officer for the Municipal Tuberculosis, Mental Deficiency,  
Maternity and Child Welfare, &c., Schemes, and for the School Medical Service.

3931



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*The Mayor (Mr. Alderman McGaul) ex-officio a member of all ordinary Committees.*

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The Annual Report was submitted to the Health Committee in September, 1920.

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Medical Officer of Health, and

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To the Mayor, Aldermen, and Councillors of the County Borough  
of Birkenhead, and the Chairmen and Members of the Birkenhead  
Education, Mental Deficiency, and Maternity and Child Welfare  
Committees.

No.	
Class.	B.C.V 145
Cat.	N.6.
Col.	



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## SHORT STATISTICAL SUMMARY.

1919.

Area of Borough .....	3,850 acres, or a little over 6 square miles
Estimated population (at midsummer) .....	149,853
Number of persons per acre (density of population) .....	38.9
Estimated number of houses in Borough .....	26,861
Number of inhabited houses at time of census, 1911 .....	24,343
Rateable value .....	£729,978
Birth-rate per thousand of the population .....	22.5
Death-rate                   ,,                   ,,                   ,, .....	13.7
Average death-rate for last ten years .....	15.1
Phthisis death-rate per thousand of the population .....	0.9
Infantile mortality rate (per 1,000 births) .....	102
Percentage of total deaths which were uncertified .....	0.53
Average number of children in elementary schools .....	24,768
Total children medically inspected during year .....	9,794

## PREFACE.

The following report deals with the year ending 31st December, 1919. On March 9th, 1919, Dr. Sydney Marsden, who had been Medical Officer of Health for Birkenhead for twenty-eight years, died. An appreciation of Dr. Marsden's work, written by Dr. Banks, appeared in last year's annual report.

Dr. Banks carried on the work of the Department until I took up duty in September, and I have to thank him for his ready help and much useful information.

I should like here also to express my sense of indebtedness to Mr. Dawson, Chief Inspector, for invaluable assistance, and to the various members of the staff for excellent work done during the year.

It has been found necessary in writing this report to substitute a new arrangement for that observed in previous years, and an attempt has been made to group into defined sections the various subjects (constantly increasing in number) with which public health administration is concerned. It is hoped that this will simplify reading and facilitate reference.

In a circular issued by the Ministry of Health in January, 1920, it is stated that a survey in annual health reports of existing conditions and arrangements is specially needed at the present moment "to form the basis of that careful and comprehensive scheme of health developments generally which it is hoped may shortly follow, in every locality, upon the recent unification in the Ministry of Health of the various central functions in respect of all matters affecting the health of the people; since this unification of the central administration implies and, indeed, cannot be effective without, a corresponding co-ordination of local health activities."

The Ministry's pronouncement will be welcomed as indicating a new policy; it is an encouragement from the Ministry to each local authority to look upon its health problem as a whole. This means getting away from the sectional view that the health of an infant, the health of a child attending school, the health of a tuberculous workman, the health of an expectant unmarried mother, are quite distinct problems calling for separate staff, isolated premises, and different methods. It means realising that all these and many other sides of public health work are essentially one, and that only when the machinery for dealing with them is gathered into one central workshop, and, so to speak, driven off the same shaft, can fully co-ordinated results be obtained.

D. M. M.

## ADMINISTRATION.

**General administrative arrangements.**—The arrangements made by the local authority for dealing with various branches of health work—e.g., maternity and child welfare, tuberculosis, etc.—are set out in the appropriate sections of this report.

**Staff.**—The staff engaged on the work of the department consisted at the end of 1919 of the following:—

*Medical Officer of Health and Principal Administrative Medical Officer:*

D. MORLEY MATHIESON, M.A., M.D. (Edin.), D.P.H.

*Assistant Medical Officers (whole time):*

G. N. ANDERSON, M.B., CH.B., D.P.H. (Tuberculosis).

R. HASTINGS SMYTHE, L.R.C.P. and S. (I.). (School Medical Inspection).

MARY A. S. DEACON, M.B.E., M.B., B.S. (School Medical Inspection).

*Assistant Medical Officers (part time):*

CHARLES S. BREWER, O.B.E., L.R.C.P. & S. (Ed.), D.P.H. (Child Welfare).

WILLIAM R. DALZELL, M.A., M.B., C.M. (Venereal Diseases).

*Bacteriologist and Pathologist:*

Professor J. M. BEATTIE, M.A., M.D., etc.

*Analyst:*

HERBERT E. DAVIES, M.A., B. Sc., F.I.C.

*Inspectors:*

WILLIAM DAWSON, Assoc. San. Inst. (Chief Inspector and Inspector under the Food and Drugs Acts).

JOHN M. CARNIE (Meat, Fish, and Slaughter House Inspector).

ALFRED LONGSTAFF (Housing Inspector).

JOHN LEE (District Sanitary Inspector).

H. T. TAYLOR (District Sanitary Inspector).

W. H. TILSTON (District Sanitary Inspector).

JOSEPH CROSHAW, (District Sanitary Inspector).

S. G. RACKHAM (Workshops, Food and Drugs, etc., Inspector).

ISAAC TAYLOR (Disinfecting Inspector).

GEORGE WILLS (Shops Inspector).

WILLIAM S. EDWARDS (Common Lodging Houses Inspector).

*Matron, Fever Hospital:*

MISS EMILY YEOMANS.

*Nurses and Health Visitors:*

MISS M. GIBSON (Chief Health Nurse).

MRS. L. E. FLETCHER (Health Nurse and Inspector of Midwives).

MISS BOYDELL.

MISS BRINSON.

MISS COUCHE.

MISS FLETCHER.

MISS GRAHAM.

MISS JONES.

MISS LEWIS.

MISS ROBINSON.

MISS SMITH.

MISS STEELE.

MISS WILLIS.

MRS. WILSON.

## ADMINISTRATION—CONTINUED

*Clerks:*

JOSEPH BENNETT (Chief Clerk).  
JOHN OWEN.  
ROLAND E. JONES.  
ERIC P. ROGERS.  
H. F. MITCHELSON.  
MISS E. FITZ-PATRICK.  
MISS D. DE LA MARE.  
J. V. ROSCOE (School Medical Service).  
J. CHALLINOR (School Medical Service).  
N. WILSON (School Medical Service).  
W. S. SHAW (School Medical Service).

*General:*

NURSING STAFF, FEVER HOSPITAL—18.  
DOMESTIC STAFF, FEVER HOSPITAL—19.  
MALE STAFF, FEVER HOSPITAL—5.  
SANITARY LABOURERS, ETC.—8.

## AREA, SITUATION, AND WEATHER.

### AREA AND SITUATION

Birkenhead occupies an area of 3,850 acres, or nearly six square miles, and is the largest borough in Cheshire.

It is situated on the Mersey, near the extremity of the Wirral Peninsula, which forms the north-west corner of the county. This peninsula is roughly 18 miles long and 6.7 miles wide, with its long axis running north-west from Chester. It is bounded by the Mersey on one side, with Liverpool and Lancashire on the further bank; and on the other by the Dee and North Wales.

The central part of the Wirral, throughout almost its entire length and the greater part of its breadth, is land at an elevation of over 100 feet. In several situations the ground reaches a level of over 200 feet; and at one part (Heswall) the 300 feet contour line is passed. From the elevated central portion the ground slopes fairly rapidly downwards to the Mersey (N.E.) and to the Dee (S.W.) Along the banks of the Mersey important commercial works have been established; the remainder of the peninsula is agricultural in character.

The situation of Birkenhead in the Wirral has certain interesting features calling for attention, especially in relation to the question of the Borough's future natural growth and expansion.

Roughly square in shape, it is bounded on the east by the River Mersey and on the north by the "Great Float"—a sheet of water communicating with the Mersey and separating Birkenhead from the neighbouring county borough of Wallasey. On both of these sides, therefore, the Borough is shut in; and room for its expansion is to be found only to the south and west. Across the southern and western boundaries there is already to be found a considerable overflow population.

The highest part of the Borough (over 200 feet above sea level) is on the west side; and, broadly speaking, the main fall of the ground is from the western and southern boundaries of the Borough in an easterly and northerly direction. The nature of the slope of the ground permits of good drainage and sewerage arrangements; engineering matters which are dealt with by the Borough Engineer.

### METEOROLOGICAL RESULTS.

I am indebted to W. E. Plummer, Esq., M.A., F.R.A.S., the director of the Liverpool Observatory at Bidston, Birkenhead, for



valuable statistical information regarding the meteorological conditions prevailing from time to time during the past year.

The mean barometer reading for the whole year was 29.924 inches, as compared with a mean of 29.920 for the past 50 years.

The number of wet days in 1919 was 180.

The total amount of rainfall at Bidston was 29.120 inches, as compared with an average annual rainfall for the past 50 years of 28.437 inches.

The mean temperature for the year was 47.6° Fahrenheit.

In tables A 1 and A 2 monthly and weekly results are set out; those in table A 2 being for the 52 weeks ending December 27th, 1919.

TABLE A 1.

Meteorological observations during 1919. Monthly results.

1919	Mean Temperature	Mean Barometer	Rainfall—1 ft. above ground
	° F.	INCHES	INCHES
January .....	38.6	29.700	2.480
February .....	35.6	29.788	1.056
March .....	38.2	29.816	4.912
April .....	44.9	29.965	1.085
May .....	56.6	30.042	0.955
June .....	56.4	30.105	1.402
July .....	56.9	30.054	1.756
August .....	59.1	29.975	3.744
September .....	55.5	29.974	2.897
October .....	47.3	30.175	2.675
November .....	39.3	29.783	1.317
December .....	42.7	29.709	4.841

**TABLE A 2.**  
**Meteorological observations during 1919.      Weekly results.**

Weeks.	Barometer means reduced to sea level & to 32°F.	Means of Evaporation.	Thermometer means.	Rainfall.		Average percent of cloud to clear sky.	Mean hourly horizontal motion of air in miles	Percent of time wind blew from S., S.W. W. & N.W.
				Hours.	Inches.			
1 .....	29·391	38·82	40·65	22·7	0·755	65·7	19·9	55·95
2 .....	29·123	37·61	39·47	11·5	0·297	64·2	17·2	33·33
3 .....	29·716	39·18	41·05	29·6	1·110	61·4	16·2	64·28
4 .....	30·217	36·65	37·90	18·5	0·432	87·1	13·2	13·09
5 .....	30·051	33·24	34·81	9·5	0·144	72·8	12·2	32·14
6 .....	30·047	31·28	32·60	3·0	0·059	72·8	14·0	9·52
7 .....	30·109	31·80	33·47	5·1	0·096	45·7	12·9	—
8 .....	29·226	38·21	39·32	36·6	0·901	90·0	16·7	17·85
9 .....	29·698	35·90	38·20	0·0	0·000	58·5	10·8	48·80
10 .....	29·754	38·11	39·85	32·0	0·999	74·2	13·3	48·80
11 .....	29·857	38·14	40·15	34·9	1·763	72·8	15·1	73·21
12 .....	30·021	34·95	36·32	44·6	1·548	85·7	16·7	30·95
13 .....	29·708	33·95	36·02	6·7	0·218	57·1	22·1	49·40
1st Qr.	29·762	35·98	37·67	254·7	8·322	69·8	15·4	36·71
14 .....	29·925	38·01	39·91	9·5	0·474	74·2	14·7	86·90
15 .....	29·803	44·27	47·18	12·8	0·285	62·8	18·6	98·21
16 .....	29·763	44·20	46·84	16·5	0·218	74·2	20·6	91·66
17 .....	30·291	41·51	44·75	8·9	0·224	51·4	18·2	69·64
18 .....	29·786	41·68	44·41	23·6	0·581	71·4	21·0	77·97
19 .....	29·990	48·44	53·12	7·3	0·122	62·8	12·5	32·73
20 .....	29·999	53·77	59·27	1·9	0·071	60·0	12·0	42·85
21 .....	30·182	50·75	57·61	8·3	0·396	48·5	12·5	39·88
22 .....	30·171	54·50	60·44	0·7	0·053	22·8	7·4	42·85
23 .....	30·145	54·02	58·07	4·2	0·197	45·7	13·7	91·66
24 .....	30·129	53·58	59·24	4·7	0·388	51·4	16·7	84·52
25 .....	30·088	52·01	56·17	13·6	0·330	61·4	12·7	98·80
26 .....	30·112	50·00	53·64	13·1	0·262	80·0	24·7	86·30
2nd Qr.	30·029	48·21	52·35	125·1	3·601	58·9	15·7	72·61
27 .....	29·849	50·48	53·48	25·0	1·034	85·7	20·6	46·42
28 .....	30·116	52·32	55·60	2·1	0·138	70·0	13·3	67·85
29 .....	30·016	55·31	58·50	11·8	0·325	74·2	13·6	95·23
30 .....	30·085	53·88	57·38	9·9	0·359	50·0	17·8	97·02
31 .....	30·163	54·38	58·47	2·9	0·125	75·7	15·1	79·76
32 .....	30·082	55·64	60·15	5·2	0·245	75·7	15·0	98·80
33 .....	30·152	59·11	64·00	2·2	0·037	40·0	11·6	77·97
34 .....	30·002	55·54	60·38	15·3	1·287	71·4	15·8	83·92
35 .....	29·641	49·75	52·67	30·3	2·152	81·4	18·7	69·04
36 .....	29·823	55·37	59·14	17·8	0·881	72·8	11·4	60·11
37 .....	30·199	55·42	59·55	4·3	0·129	57·1	11·4	50·59
38 .....	30·116	49·72	53·42	17·9	1·090	55·7	16·3	62·50
39 .....	29·702	48·88	51·95	23·4	0·792	68·5	19·1	89·28
3rd Qr.	29·995	53·52	57·28	168·1	8·594	67·5	15·3	75·26
40 .....	30·033	46·97	50·17	9·4	0·391	54·2	13·0	70·83
41 .....	30·353	45·88	49·04	8·0	0·353	45·7	7·7	24·40
42 .....	30·028	42·45	46·22	21·1	0·735	61·4	18·2	87·50
43 .....	30·253	46·10	48·95	19·6	1·136	67·1	13·5	13·69
44 .....	30·065	38·78	42·21	3·9	0·088	60·0	17·1	26·19
45 .....	29·803	37·90	39·70	3·2	0·039	82·8	9·8	9·52
46 .....	29·865	31·64	33·97	6·9	0·194	57·1	10·3	6·54
47 .....	29·841	42·65	44·22	25·1	0·851	68·5	26·4	98·21
48 .....	29·514	37·95	39·34	9·5	0·169	71·4	15·8	54·16
49 .....	29·756	42·07	43·87	23·8	0·765	74·2	26·2	88·09
50 .....	29·883	37·70	40·04	6·6	0·160	50·0	17·4	58·33
51 .....	29·953	42·57	43·94	30·9	1·294	81·4	22·3	76·19
52 .....	29·542	40·17	42·12	38·8	1·734	77·1	25·1	89·88
4th Qr.	29·914	40·98	43·36	206·8	7·909	65·4	17·1	54·11
Year ...	29·925	44·67	47·66	754·7	28·426	65·4	15·8	59·67

**POPULATION, BIRTHS, AND DEATHS.****POPULATION.**

**Growth of the Borough.**—In the year 1150 the third Baron of Dunham Massey founded here a priory in honour of St. Mary and St. James; and from this year the history of Birkenhead dates.

It was not until the nineteenth century, however, that growth beyond the limits of a village began. In 1801 the population of Birkenhead parish was 110; in 1811, 105; in 1821, 200; in 1831, 2,569.

In 1833 the parish of Birkenhead was united with that of Claughton for certain administrative purposes and the Birkenhead Improvement Commissioners were constituted. In 1841 the combined population of the two parishes (Birkenhead and Claughton) was 8,463; in 1851, 24,999; in 1861, 37,796; in 1871, 45,418.

In 1877 a Charter of Incorporation was granted to Birkenhead, and the Municipal Borough thus incorporated was made co-terminatous with the Parliamentary Borough of Birkenhead (which had been constituted in 1861). Its limits now included the parishes of Tranmere and Oxtan, and part of Higher Bebington.

In 1881 the population of the new Borough was 84,006; in 1891 99,857; in 1901, 110,915; in 1911, 130,794.

The rapid growth in the population will be made clear by a reference to the following table.

TABLE P 1.  
Population of Birkenhead, 1801—1911.

Parish .....	Birkenhead	Claughton -cum- Grange.	Tranmere.	Oxtan.	Higher Bebington (part of in Borough)	Total for area now included in Birkenhead County Borough.
Population 1801	<b>110</b>	67	353	137	40	<b>707</b>
" 1811	<b>105</b>	88	474	128	53	849
" 1821	<b>200</b>	119	825	165	60	1369
" *1831	<b>2569</b>	224	1168	234	76	4271
" 1841	<b>8223</b>	<b>240</b>	2554	546	435	11998
" 1851	<b>24285</b>	<b>714</b>	6519	2007	750	34275
" 1861	<b>36212</b>	<b>1584</b>	9918	2670	1265	51649
" †1871	<b>42981</b>	<b>2437</b>	16143	2610	1800	65971
" 1881	<b>51610</b>	<b>2934</b>	<b>23987</b>	<b>3312</b>	<b>2163</b>	<b>84006</b>
" 1891	<b>58287</b>	<b>3510</b>	<b>30680</b>	<b>4429</b>	<b>2951</b>	<b>99857</b>
" 1901	<b>61736</b>	<b>3920</b>	<b>37709</b>	<b>4579</b>	<b>2971</b>	<b>110915</b>
" 1911	<b>65262</b>	<b>7909</b>	<b>49257</b>	<b>4798</b>	<b>3568</b>	<b>130794</b>
Acreage .....	1280	439	1071	814	246	3850

\* 1833—Claughton added.

† 1877—Tranmere, Oxtan and part of Higher Bebington added.

**Population, 1919.**—(a) The Registrar-General's estimates of the population of the Borough for the year 1919 for the purpose of the calculation of the death-rate and birth-rate are as follows:—

For the death-rate .....	148,052.
For the birth-rate .....	154,226.

The death-rate population excludes all non-civilian males, whether serving at home or abroad. This is considered by the Registrar-General to be necessary for the purposes of local death-rates because it was proved impossible to transfer the deaths of non-civilians to their areas of residence or to deal in any other satisfactory manner with the local mortality of this element in the population. These estimates are based mainly upon the rationing returns supplied by the Ministry of Food.

The birth-rate (and marriage-rate) population, on the other hand, is intended to include all the elements of the population contributing to the birth and marriage rates. It consists, therefore, of the death-rate or civilian population plus all non-civilians enlisted from this country, whether serving at home or abroad. This non-civilian element has been distributed over all the districts in the country in proportion to their estimated civilian population.

(b) The estimated population, calculated on the census population of 1901 and 1911, is 149,853.

(c) The general birth-rate and death-rate for 1919 have been worked out on the basis of both the above estimates and are shewn below. All special death-rates (for example, the phthisis death-rate) have been calculated on the basis of the second of the above estimates.

**Density of population.**—The density of the population of Birkenhead at the time of the last census (1911) was 33.9 per acre. In 1919 the density had risen to 38.9 per acre.

The corresponding ratio of density for the 75 county-boroughs of England and Wales at the time of the last census was 21.0 persons per acre.

## BIRTHS.

**Births registered during 1919, and birth-rate.**—During the year 3,385 births belonging to the Borough were registered. (This total includes 21 Birkenhead births registered in other areas and transferred to Birkenhead, and excludes 75 births belonging to other areas which occurred in Birkenhead and were transferred to the areas concerned. Among the latter are a large number of births which occurred at the Birkenhead Maternity Hospital and the Birkenhead Union Infirmary.)

This corresponds to a birth-rate of 21.9 per 1,000 of the population (taking the Registrar-General's population estimate) or 22.5 per 1,000 of the population (taking the second population estimate given above).



**Birth-rate in recent years.**—The birth-rates since 1911 are as follows:—

1911 .....	28.4	per 1,000
1912 .....	28.2	"
1913 .....	28.7	"
1914 .....	27.3	"
1915 .....	27.4	"
1916 .....	26.9	"
1917 .....	22.4	"
1918 .....	21.1	"
1919 .....	22.5	"

**Comparison of birth-rate with rates for country generally.**—

	Per 1,000 of population.
England and Wales .....	18.5
96 Great Towns (including London) .....	19.0
148 Smaller Towns .....	18.3
London .....	18.3
Birkenhead .....	22.5

**Sex-distribution of births.**—Of the 3,385 births, 1,756 were males and 1,629 females; a proportion of 1,078; 1,000.

**Legitimacy.**—Out of the 3,385 births registered, 143 were illegitimate; a percentage of 4.2.

**Births notified during 1919.**—During the year 3,639 births were notified in the Borough under the Notification of Births Acts, 1907 and 1915, and information was received from the registrars respecting 61 other births which had been registered but not notified—a total of 3,700. Of these, 130 were still-births, leaving a total of 3,570 live births. This total includes births which occurred in the Birkenhead Maternity Hospital and the Birkenhead Union Infirmary, many of which were transferable to other areas.

The following is an analysis of the above births:—

**Births in Public Institutions:—**

Maternity Hospital .....	406	(22 still-births)
Union Infirmary .....	47	(5 " )
Birkenhead Borough Hospital .....	5	(2 " )
Other births (including those in nursing homes):—		
Notified by doctors only .....	395	(16 " )
Births attended by midwives, or midwives and doctors .....	2847	(85 " )
	3700	(130 " )

**Un-notified births.**—61 cases of un-notified births occurred. 44 of these were attended by medical practitioners, 10 by certified midwives, and 5 by the Maternity Hospital Authorities, and in 2 cases no particulars were obtainable.



**DEATHS.**

**Death-rate.**—2.067 deaths occurred during the year ; the total figure includes 114 deaths of Birkenhead residents which occurred outside the Borough, but excludes 153 deaths of non-residents which occurred in the area.

This gives a death-rate of 13.9 (calculated on the Registrar-General's estimate of the population) or 13.7 (calculated on the basis of the second estimate of population given above).

**Deaths in recent years.**—The death-rates since 1911 are as follows:—

1911 .....	16.0 per 1,000
1912 .....	14.7 „
1913 .....	14.9 „
1914 .....	15.6 „
1915 .....	15.6 „
1916 .....	14.2 „
1917 .....	13.3 „
1918 .....	17.6 „
1919 .....	13.7 „

Influenza and its complications were the main contributing factors in the high death-rate of 1918.

**Seasonal deaths.**—The following gives the deaths for each quarter of the years 1918 and 1919:—

	No. of deaths.	
	1918	1919
First quarter .....	533	836
Second quarter .....	507	426
Third quarter .....	465	334
Fourth quarter .....	1100	471
Totals .....	2605	2067

**Sex-distribution of deaths.**—Of the total deaths 1,086 were males and 981 females, a proportion of 1,107 ; 1,000.

**Coroners' inquests.**—Coroners' inquests were held regarding 145 deaths—that is, in 7 per cent. of the total deaths during the year. There were no deaths due to overlaying during the year.

**Uncertified deaths.**—Not all the death causes which are classified represent diseases or symptoms observed and certified by medical men in attendance during the last illness, or verdicts following official

investigation. A significant proportion of the death causes are entered in the register on the doubtful testimony of deceased persons' relatives, or friends, or fellow-lodgers. The registrars have, therefore, been required to mark in the returns furnished every death not certified by a registered practitioner or made the subject of a coroner's inquest. In 1919, out of the 2,067 deaths registered, 11 were marked "not certified," that is, 0.53 per cent. The causes of the 11 deaths were entered in accordance with the statements of persons giving information to the registrars, viz.:—

Premature birth .....	4
Influenza .....	1
Cardiac syncope .....	1
Epileptic seizure.....	1
Angina pectoris .....	1
Shock and heart failure after child birth .....	1
Valvular disease of heart .....	1
Chronic bronchitis .....	1

**Naval and military deaths.**—The deaths of 3 sailors and 24 soldiers were registered in the Borough during the year 1919; of these 19 occurred in institutions.

**Causes of death.**—The causes of death, classified according to age, are shewn in table P 2.

The causes of death, classified according to different localities, are shewn in table P 3.

TABLE P 2.  
Deaths: Causes and ages.

Causes of death.		Net deaths at the subjoined ages of residents, whether occurring within or without the district.								
		All ages	Under 1 year	1 and under 2	2 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards
All causes	Certified .....	2056	341	77	120	115	112	368	418	505
	Uncertified .....	11	5	1	...	...	...	1	2	2
Chickenpox .....		...	...	...	...	...	...	...	...	...
Enteric fever .....		1	...	...	...	...	...	1	...	...
Smallpox .....		...	...	...	...	...	...	...	...	...
Measles .....		2	...	...	...	2	...	...	...	...
Scarlet fever .....		30	1	1	11	14	...	3	...	...
Whooping cough .....		21	9	5	6	1	...	...	...	...
Diphtheria and membranous croup .....		21	1	2	11	7	...	...	...	...
Influenza .....		170	10	11	17	7	22	66	29	8
Erysipelas .....		2	...	...	...	...	...	...	2	...
Cerebro-spinal fever .....		5	...	...	1	1	1	2	...	...
Other zymotic diseases .....		13	4	...	1	1	1	2	2	2
Phthisis (pulmonary tuberculosis) .....		146	1	...	3	15	21	79	26	1
Tuberculous meningitis .....		17	4	4	5	4	...	...	...	...
Other tuberculous diseases .....		21	5	1	3	5	1	5	1	...
Rheumatic fever, rheumatism .....		13	...	...	1	5	5	2	...	...
Cancer, malignant disease .....		130	...	...	...	...	1	22	66	41
Bronchitis .....		176	31	5	6	3	...	11	47	73
Broncho-pneumonia .....		104	37	15	21	7	3	6	6	9
Pneumonia (all other forms) .....		179	12	14	17	6	15	51	39	25
Other diseases of respiratory organs .....		37	4	...	...	2	2	10	11	8
Diarrhœa and enteritis .....		48	33	5	3	3	...	1	2	1
Appendicitis and typhlitis .....		16	...	...	...	6	3	4	3	...
Alcoholism .....		4	...	...	...	...	...	2	2	...
Cirrhosis of liver .....		5	...	...	...	...	...	...	5	...
Nephritis and Bright's disease .....		42	1	...	...	1	3	6	22	9
Puerperal fever .....		10	...	...	...	...	...	10	...	...
Other accidents and diseases of pregnancy and parturition .....		11	...	...	...	...	1	10	...	...
Congenital debility and malformation, including premature birth .....		157	153	2	1	1	...	...	...	...
Violent deaths, excluding suicide .....		69	5	6	7	7	8	10	16	10
Suicides .....		10	...	...	...	...	...	6	3	1
Brain disease .....		74	3	2	...	1	3	7	28	30
Heart disease .....		153	...	...	...	7	14	19	47	66
Other diseases .....		380	32	5	6	9	8	34	63	223
Totals .....		2067	346	78	120	115	112	369	420	507

TABLE P 3.  
Deaths: Causes and districts.

Causes of death.	Deaths in or belonging to localities at all ages.							Total deaths in Public Institutions in the district.
	Whole Borough.	Birkenhead.	Tramere.	Claughton.	Oxton.	Bebington.	Workhouse.	
All causes } Certified .....	2056	973	575	95	39	38	336	308
Uncertified .....	11	3	8	...	...	...	...	...
Chickenpox .....	...	...	...	...	...	...	...	...
Enteric fever .....	1	1	...	...	...	...	...	2
Smallpox .....	...	...	...	...	...	...	...	...
Measles .....	2	2	...	...	...	...	...	...
Scarlet fever .....	30	21	6	2	...	1	...	22
Whooping cough .....	21	14	6	1	...	...	...	...
Diphtheria and membranous croup .....	21	15	6	...	...	...	...	13
Influenza .....	170	75	74	11	4	2	4	3
Erysipelas .....	2	1	1	...	...	...	...	...
Cerebro-spinal fever .....	5	3	2	...	...	...	...	4
Other zymotic diseases .....	13	5	...	2	...	...	6	5
Phthisis (pulmonary tuberculosis) .....	146	61	30	6	1	7	41	12
Tuberculous meningitis .....	17	8	8	...	...	1	...	4
Other tuberculous diseases .....	21	9	8	...	...	...	4	5
Rheumatic fever, rheumatism .....	13	7	2	...	...	...	4	2
Cancer, malignant disease .....	130	38	42	9	7	4	30	15
Bronchitis .....	176	104	38	6	1	1	26	4
Broncho-pneumonia .....	104	69	29	2	1	...	3	15
Pneumonia (all other forms) .....	179	90	36	8	3	4	38	20
Other diseases of respiratory organs .....	37	13	9	...	2	...	13	3
Diarrhoea and enteritis .....	48	34	11	1	...	...	2	4
Appendicitis and typhlitis .....	16	7	4	3	1	...	1	14
Alcoholism .....	4	3	...	...	...	...	1	...
Cirrhosis of liver .....	5	...	3	...	...	1	1	1
Nephritis and Bright's disease .....	42	14	13	4	2	1	8	4
Puerperal fever .....	10	6	1	...	...	...	3	7
Other accidents and diseases of pregnancy and parturition .....	11	6	4	...	...	...	1	5
Congenital debility and malformation, including premature birth .....	157	91	49	5	1	2	9	24
Violent deaths, excluding suicide .....	69	42	19	3	1	1	3	41
Suicides .....	10	8	2	...	...	...	...	2
Brain disease .....	74	21	26	8	2	4	13	5
Heart disease .....	153	65	47	11	3	2	25	9
Other diseases .....	380	143	107	13	10	7	100	63
Totals .....	2067	976	583	95	39	38	336	308

**Infantile mortality.**—There were 346 deaths of infants under 1 year old. This corresponds to an infantile mortality rate of 102 per 1,000 births.

There were 31 deaths in illegitimate infants under 1 year old; giving an illegitimate infant mortality rate of 217 per 1,000. Thus the chances of the illegitimate child dying within the first year of life were more than twice those of the legitimate child.

The infantile mortality rates in recent years are shewn below:—

1911 .....	136
1912 .....	98
1913 .....	117
1914 .....	122
1915 .....	122
1916 .....	105
1917 .....	95
1918 .....	110
1919 .....	102

The causes of infant deaths, and the ages at which death occurred, are shewn in the following table:—

TABLE P 4.  
Infant deaths, 1919: Causes and ages.

Causes of death.		Under 1 week.	1-2 weeks.	2-3 weeks.	3-4 weeks.	Total under 4 weeks.	Over 4 weeks & under 3 months.	3-6 months.	6-9 months.	9-12 months.	Total under 1 year.
All causes	Certified .....	90	23	9	13	135	61	50	52	43	341
	Uncertified .....	4	...	...	...	4	...	...	1	...	5
Smallpox ..		...	...	...	...	...	...	...	...	...	...
Chickenpox ..		...	...	...	...	...	...	...	...	...	...
Measles .....		...	...	...	...	...	...	...	...	...	...
Scarlet fever ..		...	...	...	...	...	...	...	...	1	1
Whooping cough ..		...	...	...	...	...	2	3	2	2	9
Diphtheria and croup ..		...	...	...	...	...	...	...	1	...	1
Erysipelas ..		...	...	...	...	...	...	...	...	...	...
Tuberculous meningitis ..		...	...	...	...	...	...	...	3	1	4
Abdominal tuberculosis ..		...	...	...	...	...	2	...	1	...	3
Other tuberculous diseases ..		...	...	...	...	...	...	1	1	1	3
Meningitis (not tuberculous) ..		1	...	...	...	1	...	1	1	...	3
Convulsions .....		3	1	...	...	4	3	1	...	...	8
Laryngitis .....		...	...	...	...	...	...	...	1	1	2
Bronchitis ...		1	2	...	1	4	9	7	4	7	31
Pneumonia (all forms) ..		...	...	...	...	...	10	11	13	15	49
Diarrhoea .....		...	...	...	...	...	1	2	4	2	9
Enteritis .....		...	1	1	...	2	2	8	4	8	24
Gastritis .....		...	...	1	...	1	1	2	1	...	5
Syphilis .....		...	...	...	...	...	2	2	...	...	4
Rickets .....		...	...	...	...	...	...	...	...	...	...
Suffocation (overlying) ..		2	...	...	...	2	2	...	...	...	4
Injury at birth .....		...	...	...	...	...	...	...	...	...	...
Atelectasis .....		4	1	...	...	5	...	...	...	...	5
Congenital malformations ..		11	6	...	2	19	3	...	1	...	23
Premature birth .....		58	7	3	3	71	4	...	...	...	75
Atrophy, debility and marasmus ..		13	5	3	7	28	14	6	5	2	55
Other causes .....		1	...	1	...	2	6	6	11	3	28
Totals.. .....		94	23	9	13	139	61	50	53	43	346

Net births in the year—

Legitimate .....	3242
Illegitimate .....	143

Net deaths in the year—

Legitimate infants .....	315
Illegitimate infants ...	31



**Deaths from tuberculosis.**—Tuberculosis was responsible for 9 per cent. of all the deaths recorded in the Borough in 1919. The deaths from the disease were as follows:—

Deaths from tuberculosis of the lungs .....	146
Deaths from other forms of tuberculosis .....	38
	<hr/>
Total .....	184
	<hr/>

This gives a tuberculosis death-rate of 1.23 per 1,000 of the population.

Of the 146 deaths from pulmonary tuberculosis during 1919, 126 occurred in individuals between 15 and 65 years old—that is, of a wage earning age.

This subject is further dealt with in the “ Tuberculosis ” section of this report.

**Deaths from epidemic diseases.**—The seven “ principal epidemic diseases ” caused 113 deaths, as follows:—

Diarrhœa and enteritis (under 2 years) .....	38
Whooping Cough .....	21
Measles .....	2
Scarlet Fever .....	30
Diphtheria (including membranous croup) .....	21
“ Fever ” (enteric, typhus, and simple continued fever) .....	1
Smallpox .....	0

This corresponds to a death-rate from all these diseases of 0.75 per 1,000 of the population.

**Deaths from other notifiable infectious diseases.**—Pneumonia (which was notifiable as from 1st March, 1919) caused, in its various forms, 283 deaths.

Puerperal septicæmia caused 10 deaths; erysipelas, 2; cerebro-spinal fever, 5; acute encephalitis lethargica, 3.

**Deaths from certain non-notifiable infectious diseases.**—Syphilis was returned as the cause of 5 deaths, and 1 death was due to anthrax.

**Comparison of Birkenhead death-rates with those for country generally.**—In the following table Birkenhead rates are shewn together with those for the country generally. The latter are provisional figures kindly supplied to me by the Registrar-General. Non-civilians are included in the figures for England and Wales, but not for other areas.

TABLE P 5.

Death-rates: Comparison with rest of country.

	Annual death-rate per 1000 civilian population.								Rate per 1000 births.	
	All causes.	Enteric fever.	Smallpox.	Measles.	Scarlet fever.	Whooping cough.	Diphtheria.	Violence.	Diarrhoea and enteritis (under 2 yrs.)	Total deaths under 1 year.
England and Wales . . . .	13.8	0.01	0.00	0.10	0.03	0.07	0.13	0.47	9.59	89
96 great Towns, including London (census population exceeding 50,000) . . . . .	13.8	0.01	0.00	0.13	0.04	0.07	0.14	0.45	12.24	93
148 smaller Towns (census population 20,000 to 50,000) . . . . .	12.6	0.01	0.00	0.10	0.03	0.08	0.12	0.39	8.67	90
London . . . . .	13.4	0.01	0.00	0.08	0.03	0.05	0.18	0.47	16.22	85
Birkenhead . . . . .	13.7	0.01	...	0.01	0.20	0.14	0.14	0.46	11.22	102

**LOCAL INDUSTRIES.****OCCUPATIONS.**

The staple industries of the district are shipbuilding, ship-repairing and engineering. A considerable section of the population is also employed in connection with flour milling, and with the importation and landing of cattle for slaughter and distribution, and large numbers of girls resident in Birkenhead are employed in the soap works at Port Sunlight, in the neighbouring district of Lower Bebington.

The occupations of males resident in Birkenhead at the time of the 1911 census were as follows (taking only groups containing over 1,000):—

Ships and boats .....	5,052
Dock labourers, wharf labourers, coalheavers, coal porters, coal labourers .....	2,305
On seas, rivers, and canals.....	2,192
General engineering and machine making .....	3,729
On railways .....	2,123
On roads .....	1,828
Building and works of construction .....	3,177
General labourers, factory labourers (undefined)...	1,451
Food, tobacco, drink, and lodging .....	3,216
General and local government .....	1,043
Professional occupations and the subordinate services .....	1,206
Commercial or business clerks .....	2,102
Merchants, agents, accountants, banking, etc., insurance .....	1,546
Messengers, porters, watchmen (not railway or government) .....	1,190

**AMOUNT OF POOR LAW RELIEF.**

The Ministry of Health request medical officers to give in their annual reports an indication of the amount of poor law relief in their areas. I am indebted to S. R. Carter, Esq., the Clerk to the Birkenhead Guardians, for the following statement of the sums expended in the relief of the poor in the Birkenhead Union in 1919:—

Union Institution ... ..	£12,276	14	7
Union Infirmary .....	12,542	10	3½
Children's Homes .....	3,742	15	4½
Outdoor relief .....	12,992	16	8
	<hr/>		
	£41,454	16	11

The Birkenhead Union area covers the County Boroughs of Birkenhead and Wallasey, and the parishes of Bidston-cum-Ford and Noctorum. The populations of these three component parts were, in 1911:—

Birkenhead .....	130,794	(62.1 per cent)
Wallasey .....	78,504	(37.3 per cent)
Bidston and Noctorum .....	1,172	(0.6 per cent.)

## **WATER SUPPLY, FOOD, AND DRUGS.**

### **WATER SUPPLY.**

The present water supply of the Borough is from deep wells in the new red sandstone.

Work on a scheme to provide a new water supply is now far advanced and may be completed before the end of 1920. This subject will be further dealt with in next year's report.

### **MILK SUPPLY.**

**Source.**—Milk is supplied to the Borough chiefly from farms in Cheshire, Shropshire and Denbighshire.

**Milkhouses, etc.**—The total number of milk shops in the Borough is 170. There are in addition 14 purveyors of milk, 6 cowsheds, and 47 farmers resident outside Birkenhead registered to purvey milk inside the Borough.

Milk shops are regularly inspected and the register of milk sellers is revised week by week.

During the year 378 notices to whitewash and efficiently to cleanse milkhouses, cowsheds, and dairies were served on occupiers of such premises, and complied with.

**Quality of milk.**—The composition of the various samples of milk taken in the Borough and analysed during the year 1919 is set out in table F 1 (page 16), and gives an indication of the general quality of the milk supply.

**Preservatives in milk and cream.**—Samples taken under the Public Health (Milk and Cream) Regulations, 1912 and 1917, during the year showed the following results:—

	Number of samples examined for the presence of a preservative.	Number in which a preservative was reported to be present.
Milk .....	127	—
Cream .....	—	—

TABLE F 1.

Composition of milk samples taken during 1919.

Date of sample.	Identification No. given in quarterly report.	Percentage of fat.	Percentage of solids not fat.	Date of sample.	Identification No. given in quarterly report.	Percentage of fat.	Percentage of solids not fat.	Date of sample.	Identification No. given in quarterly report.	Percentage of fat.	Percentage of solids not fat.
Jan. 7	1	3.85	9.44	Mar. 4	61	2.46	8.64	July 30	157	3.83	8.80
	2	4.15	8.82	8	62	3.41	8.44		158	8.76	8.18
	3	4.30	8.93	11	63	3.42	8.88	Aug. 8	178	3.55	8.88
	4	4.10	9.21	13	64	3.94	8.50	Sept. 16	191	3.71	8.84
15	5	3.70	8.90	April 8	83	4.35	9.03		192	3.94	8.89
	6	3.13	8.07		84	2.22	9.20		193	3.70	8.62
	7	2.70	7.65		85	2.76	8.55		194	3.11	9.31
20	11	2.91	8.86		86	3.22	8.71		195	2.73	8.80
	12	4.55	9.02		87	3.39	8.48		196	3.32	8.66
	13	3.54	8.33		88	3.83	8.50	19	197	3.63	8.51
21	14	3.51	8.60	14	89	3.47	8.58	23	198	4.50	9.00
	15	3.65	8.77		90	3.48	8.59		199	5.90	8.53
	16	4.05	8.75	15	91	3.97	8.70		200	3.78	8.62
25	17	3.36	8.07	May 14	104	2.98	8.62		201	3.39	7.65
29	18	4.15	8.78		105	2.70	8.91		202	3.39	8.96
	19	3.35	9.08		106	3.10	9.18		203	4.24	9.06
	20	3.82	9.17		107	1.92	8.72	30	204	3.28	7.99
	21	2.40	7.99		108	4.00	8.89		205	3.60	8.86
	22	4.30	7.98		109	3.28	8.92		206	3.98	9.02
Feb. 3	28	3.35	8.87	19	110	2.88	9.16		207	3.10	9.37
	29	3.34	7.90	20	111	2.76	9.22		208	4.45	8.49
16	39	2.91	8.53		112	2.79	9.34		209	3.28	9.17
	40	3.18	8.58		113	2.10	9.46	Oct. 13	223	4.30	9.05
	41	3.17	8.07		114	2.94	9.36		224	3.75	8.16
	42	2.94	8.96	22	115	3.10	9.29		225	3.70	9.02
	43	3.40	8.81		116	2.97	9.04		226	3.00	9.22
	44	3.09	8.79	June 4	123	3.00	8.91		227	3.80	9.17
22	45	3.33	8.65		124	3.80	9.22		228	4.45	9.22
	46	3.37	8.50		125	3.47	9.04	16	235	3.80	8.68
	47	3.30	8.24		126	3.64	9.14	Nov. 4	260	4.38	8.84
24	48	3.00	9.73		127	3.40	9.25		261	4.48	8.79
	49	3.40	8.89	24	142	3.31	8.92		262	4.30	9.04
Mar. 4	50	2.91	8.59		143	3.36	8.68		263	3.70	8.81
	51	3.39	8.79		144	3.88	8.87		264	5.30	8.37
	52	3.39	8.85		145	3.31	9.24		265	4.22	8.79
	53	4.33	9.12		146	3.53	9.02	Dec. 10	295	3.35	9.07
	54	3.10	8.50		147	3.02	9.13		296	3.63	8.91
	55	3.75	8.16	July 29	148	3.49	8.63		297	4.50	9.12
	56	2.49	8.94		149	3.50	8.71		298	3.62	8.81
	57	3.22	8.71		150	3.79	9.00		299	4.25	9.09
	58	3.32	8.79		151	3.90	8.68		300	3.87	8.92
	59	3.30	8.53		154	5.40	8.61				
	60	3.53	8.63	30	155	3.79	8.72				

Average percentage..... Fat, 3.67 ... Solids (not fat), 8.81



## OTHER FOODS.

**Unsound food and food inspection.**—The Meat and Food Inspector reports that during the year there were killed 174,524 oxen, 2,449 calves, 2,894 pigs, 2,126 sheep, 6 lambs, and 22 goats; as set out in table F 2.

TABLE F 2.  
Animals killed during 1919.

	Oxen	Calves	Pigs	Sheep	Lambs	Goats
At Woodside lairage. ....	173914	—	—	—	—	—
At Wallasey landing stage and No. 4 shed Wallasey Village	426	—	—	1863	—	22
At the Birkenhead Abattoir.	184	2449	2898	263	6	—
Totals .....	174524	2449	2898	2126	6	22

The total weight of meat destroyed during the year was 644 tons 8 cwts. 3 qrs. 13 lbs.

The total number of carcasses seized was:—

At Woodside .....	1,621	weighing	631,051 lbs.
At Wallasey Stage ...	235	„	51,960 lbs.
At No. 4 Shed, Wallasey	15	„	800 lbs.
At Tranmere Abattoir	43	„	7,481 lbs.
Total ...	1,914	„	691,292 lbs.

The number of parts of carcasses seized was:—

At Woodside .....	1,560	weighing	147,945 lbs.
At Wallasey Stage .....	16	„	1,181 lbs.
At. No. 4. Shed, Wallasey	—	„	—
At Tranmere Abattoir...	8	„	486 lbs.
Total ...	1,584	„	149,612 lbs.

The total weight of offal seized was 601,220 lbs. The total weight of articles of food seized in shops in the Borough was 1,434 lbs.

## SALE OF FOOD AND DRUGS ACTS.

During the year 299 samples were taken under the direction of Mr. William Dawson, chief inspector. Of these 298 were formal and one was informal. The articles sampled are set out in the following table,

TABLE F 3.  
Samples taken during 1919.

Article.	Samples.		Article.	Samples.	
	Formal	Informal		Formal	Informal
Milk .....	126	1	Baking powder .....	3	—
Margarine ..	17	—	Olive oil .....	3	—
Sweets.....	14	—	Mustard .....	3	—
Coffee .....	12	—	Glycerine .....	3	—
Self-raising flour .....	12	—	Dripping .....	2	—
Cocoa .....	10	—	Egg powder .....	2	—
Rice .....	9	—	Syrup .....	2	—
Lard .....	8	—	Evaporated milk .....	2	—
Condensed milk .....	8	—	Honey .....	2	—
Malt vinegar .....	7	—	Castor oil .....	2	—
White pepper.....	6	—	Am. tincture quinine .....	2	—
Butter .....	6	—	Camphorated oil .....	2	—
Jam .....	5	—	Soda, bi-carbonate ..	2	—
Bread .....	5	—	Compound liquorice p. ...	2	—
Borax .....	5	—	Arrowroot .....	1	—
Epsom salts ..	5	—	Blanemange p. ..	1	—
Cream of tartar .....	4	—	Sausages .....	1	—
Cheese .....	3	—	Sugar .....	1	—

Total samples—Formal..... 298

Informal ..... 1

299

Of the 298 samples formally sampled, 40 were found on examination by the Borough Analyst to be adulterated, namely:—

32 samples of milk.

3 „ malt vinegar.

2 „ borax.

1 sample of coffee.

1 „ self-raising flour.

1 „ ammoniated tincture of quinine.

Proceedings were taken in respect of 30 of these adulterated articles, namely:—

24 samples of milk.

3 „ malt vinegar.

1 sample of coffee.

1 „ borax.

1 „ self-raising flour.

In the case of the remaining 10 samples found to be adulterated the Health Committee, after consideration, and after hearing the vendors' explanations, decided not to institute proceedings; and the vendors were subsequently cautioned.

The informal sample of milk which was taken was found on analysis to be defective. A further sample was taken formally in course of delivery, and this, on analysis proved to be up to standard.

Particulars of the defects found in those samples with regard to which proceedings were taken, and the result of the proceedings, are set out in table F 4.

The composition of each sample of milk analysed during the year will be found in table F 1, which has previously been referred to.

TABLE F 4.

Samples with reference to which proceedings were taken.

Nature of adulteration and result of proceedings.

1919 Quarter ending	Article.	No. of sample	Adulteration.	Fine inflicted.
March 31	Milk .. .. .	6	5 per cent added water	£1 including costs
	Milk .. .. .	7	10 per cent ad. water & annatto	£2 ..
	Milk .. .. .	11	3 per cent deficient in fat	£3 ..
	Milk .. .. .	17	5 per cent added water	£2 ..
	Milk .. .. .	21	15 per cent deficiency and 6 per cent added water	£1 ..
	Milk .. .. .	22	6 per cent added water	£1 ..
	Milk .. .. .	29	7 per cent added water	dismissed
	Borax .. .. .	36	Arsenic, 50 parts per million	£5 including costs
	Milk .. .. .	41	5 per cent added water	£2 ..
	Milk .. .. .	47	3 per cent added water	£5 ..
	Milk .. .. .	56	17 per cent deficient in fat	£1 ..
	Milk .. .. .	61	18 per cent deficient in fat	£2 ..
	Milk .. .. .	84	26 per cent deficient in fat	£5 ..
	Milk .. .. .	85	8 per cent deficient in fat	£2 ..
	Milk .. .. .	105	10 per cent deficient in fat	£1 ..
June 30	Milk .. .. .	107	36 per cent deficient in fat	£1 ..
	Milk .. .. .	110	4 per cent deficient in fat	withdrawn
	Milk .. .. .	111	8 per cent deficient in fat	£1 including costs
	Milk .. .. .	112	7 per cent deficient in fat	£2 ..
	Milk .. .. .	113	30 per cent deficient in fat	£1 ..
	Milk .. .. .	114	2 per cent deficient in fat	£1 ..
	Malt vinegar..	128	Acetic acid 3·8 per cent	£1 ..
	Malt vinegar.....	129	Acetic acid 3·84 per cent	£1 ..
	Malt vinegar.....	135	Acetic acid 3·52 per cent	£1 ..
	Self-raising flour	175	Sulphate of lime 1·67 per cent	£1 ..
	Coffee.....	179	Chicory 20 per cent	£1 ..
	Milk .. .. .	195	9 per cent deficient in fat	£1 ..
	Milk .. .. .	201	10 per cent added water	10/- ..
	Milk .. .. .	204	6 per cent added water	10/- ..
	Milk .. .. .	224	4 per cent added water	£2 ..
Sept. 30				
Dec. 31				

## TUBERCULOSIS.

### ADMINISTRATIVE ARRANGEMENTS.

The arrangements made by the Birkenhead Corporation for dealing with tuberculosis in the area include

- (a) The provision of a dispensary or clinic (opened in 1913).
- (b) The provision of garden shelters (two) for suitable cases at a small rent.
- (c) The retention since August, 1914, of twelve beds at Leasowe Hospital for cases of surgical tuberculosis in children.
- (d) A joint arrangement with the Cheshire County Council, and the Councils of the County Boroughs of Wallasey, Chester, Stockport, and Stoke-on-Trent, for the provision of a sanatorium at Burntwood. At this sanatorium a certain number of beds will be reserved for Birkenhead patients.
- (e) The provision of a residential institution at Thingwall for the dual purpose of dealing with smallpox and tuberculosis. It is proposed that this, when completed, will accommodate 40 cases of tuberculosis when the institution is not required for smallpox cases.

**Staff.**—The staff engaged on tuberculosis work at the end of 1919 consisted, in addition to the Medical Officer of Health as principal medical officer, of an assistant medical officer (Dr. Norman Anderson) and two whole time nurses—one on duty at the dispensary clinic and one engaged in home visiting.

Until the end of January (when Dr. Banks returned from military service) Dr. Dalzell carried on the clinical work of the dispensary. In September Dr. Banks left to take up another appointment. Dr. Fountain Browne attended at the clinic until Dr. Anderson joined the staff in October.

During the early part of the year Miss Guilfoy acted as clinic nurse, and Mrs. Wilson was engaged on home visiting. Miss Guilfoy left in June, and during the latter part of the year Mrs. Wilson was on duty at the clinic, the work of home visiting being carried out by Miss Willis.

**The Corkhill Fund.**—Under the will of the late Mr. John Lloyd Corkhill, of Oxtou, a sum of money was provided for the assistance of persons suffering from consumption. By arrangement with the trustees, persons applying for help from the charity are passed through the municipal clinic for classification; and the trustees have been largely guided by the recommendations of the medical staff of the clinic.

## NOTIFICATION OF TUBERCULOSIS DURING 1919.

The total number of primary cases notified during the 53 weeks—29th December, 1919, to 3rd January, 1920—was 361. An analysis of these cases with regard to age and sex will be found in table T 1 (page 23).

## MORTALITY FROM TUBERCULOSIS.

The total number of deaths registered during 1919 as due to tuberculosis of the lungs was 146, as compared with 167 in 1918.

The deaths from other forms of tuberculosis numbered 38, as compared with 66 in 1918. Of these 22 were of children under five years of age.

An analysis of the tuberculosis mortality for the past nine years will be found in table T 2 (page 24).

## CASES DEALT WITH THROUGH THE TUBERCULOSIS CLINIC.

**Attendance of patients at the clinic.**—During the year 616 patients paid 2,757 visits to the tuberculosis clinic. Of these, 433 had not attended before; the remaining 183 had been to the clinic during the previous year.

The 433 cases attending for the first time were:—

Insured persons and army cases .....	235
Dependents .....	116
Non-insured class .....	82
Total ...	433

General treatment has not been undertaken at the clinic, but selected cases have been treated by special methods (e.g., with tuberculin).

**Army cases.**—For the military authorities 67 new cases were examined, with the following results:—

Found to be suffering from pulmonary tuberculosis	31
Classed as suspects .....	7
Found to be free from active tuberculosis .....	29
	—
	67
	—

In addition 148 old cases were re-examined.

**Consultation with private medical practitioners.**—Consultations between the medical staff of the clinic and general medical practitioners during the year numbered 261.



**Sanatorium benefit.**—Under an agreement between the Corporation and the Birkenhead Insurance Committee, all insured persons who apply for what is known as "sanatorium benefit" are examined and reported on by the Assistant Medical Officer of Health engaged on tuberculosis work. The misleading term "sanatorium benefit" covers not only treatment in sanatoria, but in hospitals, dispensaries, and the patients' own homes. After a patient is examined he is recommended to the Insurance Committee as suitable for one or other of these forms of treatment.

During the year 75 new applicants were dealt with at the clinic, 74 of whom were found to be suffering from pulmonary and one from non-pulmonary tuberculosis. Residential treatment was recommended in 46 cases, and dispensary and home treatment in 29 cases.

Further particulars with regard to this subject will be found in table T 3 (page 24).

**Examination of contacts.**—It has been found possible to carry out only a limited amount of work during the year in this connection. 105 persons who had been in close contact with known cases of tuberculosis were examined either at the clinic or at their own homes. Of these, 24 were found to be suffering from pulmonary tuberculosis, and 5 from other forms of the disease.

It is to be hoped that it will be possible greatly to extend this branch of the work in the future. The detection of cases of tuberculosis in the very earliest stages is all-important; unless a very great proportion of the energy directed to the control of the disease is expended in this direction little progress can be expected.

**Laboratory work.**—At the clinic 493 specimens of sputum and fluids suspected to contain tubercle bacilli were examined. Of these, 216 were from patients attending the clinic, 193 were sent in by private medical practitioners, and 84 by the army authorities.

### **HOME VISITING, DISINFECTION, ETC.**

During the year 1,790 visits were paid to homes—947 by Nurse Wilson and 843 by Miss Willis.

The number of houses disinfected after death or removal of patients was 204.

Spitting flasks were provided free of charge to 159 patients.

### **LEASOWE HOSPITAL.**

Full use has been made during the year of the twelve beds reserved by the Corporation at Leasowe Hospital for cases of surgical tuberculosis among Birkenhead residents.

There were 12 cases in hospital at the beginning of the year; 8 have been discharged or died; and 8 new cases admitted; leaving 12 patients in hospital at the end of December.

The localisation of the disease in the 20 patients under treatment during the year was as follows:—

Tuberculosis of spine .....	10
„ hip .....	2
„ knee .....	2
„ ankle joint .....	2
„ elbow .....	1
„ hand and foot .....	1
„ arm .....	1
„ peritoneum .....	1
	<hr/>
	20
	<hr/>

The eight cases discharged or died were as follows:—

Tuberculosis of spine .....	1	died from meningitis
„ „ .....	2	cured
„ knee .....	2	cured
„ ankle .....	1	cured
„ arm .....	1	cured
„ hand and foot..	1	cured

TABLE T 1.

New cases notified for first time during the year 29th December, 1919, to 3rd January, 1920).

Primary notifications.												
Age periods .....	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and up	Totals
Pulmonary—Males .....	2	2	14	7	10	12	46	20	24	5	2	144
Females .. ...	—	1	10	13	12	23	27	19	15	4	—	124
Non-pulmonary—Males...	8	12	11	8	3	1	1	1	2	—	—	47
Females	1	10	14	9	3	1	4	3	1	—	—	46
Totals .....	11	25	49	37	28	37	78	43	42	9	2	361

TABLE T 2.

Deaths from tuberculosis during the past nine years.

Year	1911	1912	1913	1914	1915	1916	1917	1918	1919
Deaths from tuberculosis of the lungs—									
Number .....	160	150	168	141	173	177	172	167	146
Rate per 1000.....	1.21	1.12	1.23	1.02	1.23	1.24	1.18	1.13	0.97
A Males—									
Number .....	98	80	104	75	105	104	89	97	73
Rate.....	0.74	0.59	0.76	0.54	0.74	0.72	0.61	0.65	0.48
B Females—									
Number .....	62	70	64	66	68	73	83	70	73
Rate .....	0.47	0.52	0.47	0.47	0.48	0.51	0.57	0.47	0.48
Deaths from other forms of tuberculosis—									
A Males (all ages)									
Number .....	31	34	32	23	44	36	36	40	24
Rate.....	0.23	0.25	0.23	0.16	0.31	0.25	0.24	0.27	0.16
B Females (all ages)									
Number .....	20	23	27	23	23	25	33	26	14
Rate .....	0.15	0.17	0.19	0.16	0.16	0.17	0.22	0.17	0.09
C Children (under 5 years)									
Number .....	36	35	39	27	42	44	44	36	22
Rate.....	0.27	0.26	0.28	0.19	0.29	0.30	0.30	0.24	0.14

TABLE T 3.

Administration of sanatorium benefit.

	1919		
	Total	Men	Women
I. Number of			
Applicants .....	75	62	13
Applicants unsuitable for treatment .....	—	—	—
Applicants treated .....	75	62	13
(a) Pulmonary cases.....	74	61	13
(b) Non-pulmonary cases .....	1	1	—
II. Forms of treatment recommended			
Residential .....	46	38	8
Dispensary and domiciliary.....	29	24	5

## **VENEREAL DISEASES.**

### **ADMINISTRATIVE ARRANGEMENTS.**

The scheme which was adopted by the Council in July, 1917, in relation to the diagnosis and treatment of venereal diseases was given in full in the annual report for 1917 (page 29 et seq.).

The Medical Officer is responsible for the general organisation and administrative supervision of the work. The venereal diseases clinic is at the Borough Hospital; the official hours when patients may be seen are as follows:—

Women—Tuesdays, 3 p.m.

Fridays, 3 p.m. and 6 p.m.

Men—Fridays, 6 p.m.

Dr. Dalzell has carried on the clinical work of the centre throughout the year.

### **TREATMENT CARRIED OUT AT THE CLINIC.**

During the year 822 persons were dealt with as out-patients at the clinic. These made 4,459 attendances.

The aggregate number of " in-patient " days was 1,271.

### **BACTERIOLOGICAL WORK.**

Professor Beattie examined 613 specimens, 607 of these being sent from the clinic and 6 from private medical practitioners. Of the specimens sent 612 were for the Wasserman reaction and 1 for the detection of gonococci.

### **PROPAGANDA.**

The following lectures were given under the auspices of the Merseyside Boroughs Branch of the National Council for Combating Venereal Diseases, to which the Birkenhead Corporation pays an annual contribution:—

- (a) Course of three lectures for nurses and midwives delivered by Dr. Joyce at the Central Library on May 6th, 13th, and 20th.
- (b) Two lectures to the Birkenhead Women Citizens Association on October 15th—one in the afternoon by Miss Vivian, one in the evening by Dr. R. Nicholson.
- (c) A lantern lecture to women in the Y.M.C.A. Hall, on December 9th, by Miss N. March, B.sc.

At these meetings pamphlets dealing with various aspects of the subject of venereal diseases were distributed, copies of which may be had on application.

## OTHER INFECTIOUS DISEASES.

### INFECTIOUS DISEASES WHICH ARE NOTIFIABLE.

The infectious diseases which (in addition to tuberculosis, already dealt with) were compulsorily notifiable to the Medical Officer of Health at any time during the past year are as follows:—

- Smallpox.
- Scarlatina.
- Diphtheria and membranous croup.
- Erysipelas.
- Typhus fever.
- Typhoid fever.
- Continued fever.
- Relapsing fever.
- Cerebro-spinal meningitis.
- Acute encephalitis lethargica.
- Acute polio-encephalitis.
- Acute poliomyelitis.
- Measles.
- German measles.
- Puerperal septicæmia.
- Ophthalmia neonatorum.
- Cholera.
- Pneumonia (acute primary and influenzal).
- Malaria.
- Dysentery.
- Trench fever.

Measles became notifiable in Birkenhead on January 1st, 1882, under the Birkenhead Corporation Act, 1881. The notification of this disease was discontinued by the health authority in August, 1907; but was again made compulsory by the Public Health (Measles and German Measles) Regulations, 1915. These regulations remained in force until 31st December, 1919, after which date they ceased to operate.

Malaria, dysentery, trench fever, and acute primary and acute influenzal pneumonia became notifiable on the 1st March, 1919, under the Public Health (Pneumonia, Malaria, Dysentery, etc.) Regulations, 1919.

**Cases notified in 1919.**—During the year 1696 cases of infectious diseases other than tuberculosis were notified to me. These are set out in table I 1.

Naval and military cases numbered 4—diphtheria 1, scarlet fever 2, enteric fever 1.



TABLE I 1.

Infectious diseases other than tuberculosis notified during 1919.

Disease.	Jan.	Feb.	Mar	Apl.	May	Jun.	July	Aug	Sept	Oct.	Nov	Dec.	Total.
Smallpox .....	—	—	1	—	—	—	—	—	—	1	—	—	2
Scarlatina .....	118	82	73	71	54	35	27	24	23	37	23	22	589
Diphtheria & membranous croup ..	11	19	21	12	11	16	6	10	9	21	21	20	177
Erysipelas .....	7	4	7	6	4	2	3	6	7	4	7	7	64
Typhus fever .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Typhoid fever .....	1	—	—	—	—	2	4	4	1	1	1	1	15
Continued fever ....	—	—	—	—	—	—	—	—	—	—	—	—	—
Relapsing fever .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal meningitis .....	—	—	1	2	—	2	—	—	—	1	—	—	6
Encephalitis lethargica (acute)....	2	1	—	—	—	—	—	—	—	—	1	—	4
Polio-encephalitis (acute)....	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis (acute)	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles .....	5	5	2	2	13	12	3	2	10	37	78	160	329
German measles .....	2	5	14	20	6	6	3	2	2	2	1	7	70
Puerperal septicæmia	1	—	2	—	2	1	—	2	4	1	1	4	18
Ophthalmia neonatorum .....	3	3	4	3	6	9	3	5	8	6	6	4	60
Cholera .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia .....	—	—	141	33	18	18	13	12	19	5	16	16	291
Malaria .....	—	—	3	2	7	1	14	15	8	4	7	7	68
Dysentery .....	—	—	—	—	—	—	—	—	—	—	2	1	3
Trench fever .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals .....	150	119	269	151	121	104	76	82	91	120	164	249	1696

**NON-NOTIFIABLE INFECTIOUS DISEASES.**

**Influenza.**—This disease continued in epidemic form during the early part of the year, and was responsible directly and indirectly for a heavy toll of deaths.

The mortality from influenza and pneumonia, week by week, together with the general mortality, is shewn in table I 2.

TABLE I 2.  
Mortality from influenza and pneumonia.

Week ending 1919	Total No. of deaths registered.	Deaths from influenza.	Deaths from pneumonia (all forms).	Week ending 1919	Total No. of deaths registered.	Deaths from influenza.	Deaths from pneumonia (all forms).
Jan. 7	49	5	13	July 8	26	—	2
14	50	4	8	15	20	—	1
21	46	7	6	22	31	—	1
28	54	5	10	29	22	—	6
Feb. 4	62	7	12	Aug. 5	26	—	3
11	71	16	14	12	18	—	3
18	112	14	30	19	24	—	1
25	98	28	23	26	32	—	1
Mar. 4	90	29	21	Sept. 2	22	—	—
11	90	22	17	9	35	—	3
18	56	12	9	16	24	—	1
25	36	6	5	23	25	—	2
Apr. 1	22	3	2	30	29	—	1
8	38	3	4	Oct. 7	29	—	1
15	57	2	8	14	22	—	1
22	29	2	5	21	41	—	2
29	35	—	5	28	35	—	3
May 6	40	—	4	Nov. 4	33	—	2
13	28	1	1	11	25	—	—
20	38	1	6	18	38	—	2
27	40	—	4	25	40	2	2
June 3	29	—	—	Dec. 2	36	—	5
10	25	—	2	9	44	—	9
17	23	—	1	16	45	1	7
24	25	—	2	23	31	—	7
July 1	19	—	—	31	52	—	5
				(8 days)			

**Anthrax.**—From information received it was found that a considerable number of shaving brushes which were possibly infected with anthrax had been introduced into the Borough; and that they were being exposed for sale in various shops.

With a view to protecting the health of the public 21 visits were made to these shops by members of the staff and 52 supposed infected shaving brushes were received from various shopkeepers.

**VACCINATION.**

Mr. S. R. Carter, Clerk to the Board of Guardians of the Birkenhead Poor Law Union, has kindly supplied me with the following latest completed information relative to vaccination in the Borough from 1st January, 1918, to 31st December, 1918, viz.:—

No. of births .....	3184
Successfully vaccinated .....	2328
Insusceptible .....	14
Had smallpox .....	—
Number in respect of whom statutory declarations of conscientious objection have been received .....	462

Died unvaccinated .....	256
Postponed by medical certificate .....	27
Removed to districts the vaccination officers of which were duly notified .....	23
Removed to places unknown or which cannot be traced...	44
In abeyance .....	30

## DISINFECTION.

**Books.**—150 Public Library and 9 school library books were collected from infected houses and disinfected; 3 books were destroyed.

**Dwellings.**—567 house-disinfecting notices were served, and 963 houses or parts of houses were disinfected during the year.

**Bedding and clothes.**—Infected bedding and clothes were collected from 710 dwellings and disinfected at the disinfecting station. In 157 further cases infected or discarded bedding and clothes were destroyed. (In addition 842 articles of bedding, clothing, etc., were disinfected for the military authorities.)

**Visits and revisits paid to houses, etc., by Disinfecting Inspector.**—Inspector Isaac Taylor paid 6858 visits and revisits to property during the year in connection with disinfection after infectious diseases (including tuberculosis).

## THE INFECTIOUS DISEASES HOSPITAL.

**Accommodation and staff.**—There has been no addition to the number of beds in the hospital during the year. The full staff consists of the Matron (Miss Emily Yeomans), 17 nurses, 19 female servants, an engineer, 2 porters and 2 gardeners.

**Cases treated during 1919.**—At the beginning of the year there were 48 patients in hospital. New cases admitted during the year numbered 503, making a total of 551 patients dealt with.

The diseases treated, together with the sex of the patients and particulars as to recoveries and deaths, are shewn below.

(Cases of smallpox are not dealt with at the Infectious Diseases Hospital, but are sent to the Wallasey Smallpox Hospital.)

TABLE I 3.

Patients sent in as suffering from	In hospital at beginning of year.	Admitted during year	Died during year	Discharged cured during year	Remaining in hospital at end of year
Scarlet fever .....M. F.	24 21	192 199	12 10	200 201	4 9
Diphtheria .....M. F.	2 1	51 57	4 9	45 46	4 3
Enteric fever.....M. F.	— —	3 1	— —	3 1	— —
Totals ...	48	503	35	496	20

**E. P. Smith memorial fund.**—1 suitable case (E.E.) received benefit from this fund during 1919.

### HOME NURSING.

An arrangement made between the Corporation and the Birkenhead District Nursing Society, dating from 1st July, 1919, provides for the home nursing of cases of influenza and pneumonia. Several cases were dealt with by the society during the last six months of the year.

## **MENTAL DEFICIENCY.**

### **ADMINISTRATIVE ARRANGEMENTS.**

The work of dealing with cases of mental deficiency in the Borough in accordance with the provisions of the Mental Deficiency Act, 1913, is carried out under the Mental Deficiency Committee, with the Town Clerk as clerk to the committee.

Mentally defective children between the ages of 7 and 16 are dealt with by the Education Committee under the Elementary Education (Defective and Epileptic Children) Acts, 1899 and 1914.

At the end of 1919 the medical staff engaged on the work of ascertainment of cases, certification, etc., consisted of the Medical Officer of Health, with Drs. Anderson and Smythe as Deputy Medical Officers; and six nurses gave part time to home visiting.

### **CASES DEALT WITH UNDER MENTAL DEFICIENCY ACT, 1913.**

During the year 12 new cases were reported; bringing the total number of cases dealt with under the Mental Deficiency Act, 1913, since that Act came into force, to 114.

9 cases were sent to institutions under judicial orders; 1 case was admitted to institution as an "election" patient; 1 case was placed under guardianship by judicial order; 4 cases were placed under supervision pending institutional vacancy arising; 5 cases were placed under home supervision; 1 case was admitted to the workhouse as a poor law case.

5 cases died during the year.

333 visits were paid to the homes of mental defectives by the health nurses.

### **CASES DEALT WITH UNDER THE ELEMENTARY EDUCATION (DEFECTIVE AND EPILEPTIC CHILDREN) ACTS,**

**1899 and 1914.**

Reference to this subject will be found in the school medical inspection section of this report (page 11).



## HOUSING AND GENERAL SANITATION.

### NUMBER OF DWELLING HOUSES, ETC., IN BOROUGH.

At the time of the 1901 census the number of inhabited houses was 19,744, giving an average number of persons per house of 5.6; the number of houses in the Borough at the time of the 1911 census was 24,343, giving an average number of persons per house of 5.3.

The approximate number of dwelling houses of all descriptions within the Borough, including institutions, at 31st December, 1919, was 26,861.

The approximate number of schoolrooms, warehouses, etc., was 1,306.

### NEW HOUSES ERECTED AND INSANITARY HOUSES DEMOLISHED.

During 1919 no new houses were erected in the Borough, although progress was made with the Corporation's housing schemes; and 7 houses were demolished. The figures for the past six years are as follows:—

			Erected	Demolished
January 1st to December 31st, 1914	.....	246	18	
„	„	1915	136	32
„	„	1916	28	1
„	„	1917	1	18
„	„	1918	Nil	36
„	„	1919	Nil	7
			<hr/> 411	<hr/> 112

I am indebted to the Borough Surveyor for the above information.

### UNINHABITED PROPERTY.

The Chief Constable has kindly supplied me with the following return of uninhabited property in Birkenhead for the past year:—

District.	Half-year ended 30th June, 1919					Half-year ended 31st Dec., 1919				
	Private Houses.	Shops.	Cottages.	Dock Cottages.	Total.	Private Houses.	Shops.	Cottages.	Dock Cottages.	Total.
Birkenhead ...	10	3	—	—	13	17	3	2	—	22
Cloughton and Oxtou .....	33	7	—	70	110	29	2	6	70	107
Tranmere and Bebington ..	5	20	4	—	29	8	5	2	—	15
Totals...	48	30	4	70	152	54	10	10	70	144

The total uninhabited and unoccupied property, 31st December, 1918, was 207, so that there was a decrease of 63 at the end of 1919 as compared with the previous year.

### PREMISES OCCUPIED BY MILITARY AUTHORITIES.

The number of premises occupied by and in connection with the troops was:—

Officers' and nurses' hostels .....	3
Hospitals .....	10
	<hr/>
	13
	<hr/>

These premises were visited periodically throughout the year by the district inspectors, the number of visits paid being 188.

### STEPS TAKEN UNDER HOUSING ACTS.

During the twelve months ending December 31st, 1919, a large amount of work was carried out by the department under the provisions of the various Housing Acts, and the regulations made by the Local Government Board dated 2nd September, 1910. The particulars of this work are as follows:—

The number of dwelling houses inspected for the purposes of Section 17 of the Act of 1909 and the Regulations made by the Local Government Board during 1919 .....	1344
The number of dwelling houses which, on inspection, were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation .....	1
Number of dwelling houses in respect of which representations were made to the local authority .....	1
The number of dwelling houses dealt with and made fit for human habitation under Sections 14 and 15 of the Act of 1909 .....	116
The number of dwelling houses inspected under Section 17 of the Act of 1909, and the Housing Regulations 1910, and the defects found therein remedied under the provisions of the Public Health Act, 1875, and the houses put into a proper and satisfactory condition .....	324

### OTHER WORK IN CONNECTION WITH HOUSING AND GENERAL SANITATION.

In addition to the housing work outlined above, other work, of which the following is a summary, was carried out during the year:—

Number of insanitary conditions reported and investigated .....	8847
---	------

Number of formal notices given .....	3342
Number remedied after formal notice and without proceedings .....	3342
Number of cases in which proceedings had to be taken .....	Nil
Number abated after proceedings .....	Nil
Defects referred for action:—	
(a) to Borough Surveyor .....	943
(b) to Water Engineer .....	415
(c) to Borough Treasurer .....	46
Number of excavations made for the purpose of testing the condition of house drains .....	42
Number of smoke tests applied to drains of premises reconstructed under the supervision of this department .....	77
Number of water tests applied to drains .....	69
Number of smoke tests applied to the drains of new buildings, in conjunction with the Borough Surveor's department .....	1
Smoke nuisances from factory and other chimneys .....	6
Number of premises visited in connection with complaints regarding rats .....	62
Number of schools specially examined by the district inspectors .....	35

**Visits to premises.**—During the year 19,818 visits were paid by the inspectors, as follows:—

Inspector A. Longstaff (Special Housing Inspector)	849
„ J. Croshaw .....	5,027
„ J. Lee .....	4,467
„ H. T. Taylor .....	4,273
„ W. H. Tilston .....	5,202
	<hr/>
	19,818

### **INSPECTION OF LODGING HOUSES, ETC.**

During the year the inspector of common lodging houses, etc., paid regular visits to common lodging houses, and houses let in lodgings, and to the Corporation tenement dwellings. The following is a summary of the work done:—

Registered common lodging houses (17 in number):	
Day inspections .....	4,355
Night inspections .....	527
Insanitary conditions reported and dealt with...	48
Houses let in lodgings (778 in number):	
Day inspections .....	3,875
Night inspections .....	26
Insanitary conditions reported and dealt with...	210
Corporation tenement dwellings:	
Visited weekly.	
Insanitary conditions reported and dealt with....	122

## SHOPS, FACTORIES, AND WORKSHOPS.

### SHOPS ACTS, 1912 AND 1913.

The total number of visits paid to the various shops under the provisions of the above Acts and Orders made thereunder during the year was 4,469.

The particulars respecting the various proceedings and prosecutions taken under these Acts and Orders during the year are as follows:—

59 infringements were reported and 27 letters of warning sent in connection therewith.

In one case proceedings were taken for failing to close a shop for the sale of certain articles on the weekly half-holiday; a fine of 10s., including costs, was imposed.

An order was made on the 24th day of October, 1916, by the Secretary of State under Regulation 10 B of the Defence of the Realm (Consolidation) Regulations, 1914, for the early closing of shops during the winter months.

The order came into operation on the 30th day of October, 1916, and expired on the 30th day of April, 1917, but was subsequently extended and is in force at the present time.

### RETAIL BUSINESS (LICENSING) ORDER, 1918.

The number of visits paid in connection with this order was 131.

### FACTORY AND WORKSHOP ACTS, 1901 AND 1907.

(a) **Outwork.**—Lists of outworkers were received as follows:—

Nature of work.	Lists received from employers.					
	Sending twice in the year.			Sending once in the year.		
	Lists.	Outworkers. Con- tractors.	Work- men.	Lists.	Outworkers. Con- tractors.	Work- men.
Wearing apparel—						
(1) Making, &c. ....	14	10	12	11	3	24
(2) Cleaning and washing	—	—	—	—	—	—
Furniture and upholstery ...	—	—	—	—	—	—
Totals.....	14	10	12	11	3	24

There were no presecutions during the year and no instances of outwork in unwholesome or infected premises were dealt with.



Information regarding persons engaged on outwork in Birkenhead but resident in other areas was forwarded to the Medical Officers of the districts concerned.

**(b) Registered workshops.**—The total number of workshops on the register was 474:—

Bakehouses .....	62
Confectioners .....	43
Laundries .....	45
Other workshops .....	324
	<hr/>
	474

**(c) Other matters.**—In six instances information was sent to H.M. Inspector of Factories regarding failure to exhibit abstract of the Factory and Workshop Act (s. 133).

The number of underground bakehouses in the Borough at the end of the year was 34; no new certificates were granted during the year.

# **RAG FLOCK ACT, 1911.**

Pursuant to the provisions of the above Act 59 visits were made.

At the time of these visits the rag flock being used or stored on the premises was to all appearance in a satisfactory condition; no samples were, therefore, taken for the purpose of analysis.



## MATERNITY AND CHILD WELFARE.

### ADMINISTRATIVE ARRANGEMENTS.

Arrangements have been made by the local authority for carrying out the provisions of:—

1. The Notification of Births Acts, 1907 and 1915.
2. The Midwives' Acts, 1902 and 1918.
3. The Maternity and Child Welfare Act, 1918.

The authority's scheme now includes:—

1. Health visiting.
2. The provision of three infant welfare clinics.
3. The provision of 4 beds at the Birkenhead Borough Hospital for cases referred from the clinics.
4. The provision of 3 beds at the Leasowe Hospital Baby Annexe for wasting infants.
5. The provision of home nursing for children under five suffering from certain diseases, and for expectant and nursing mothers.
6. Financial support of certain institutions engaged in work in the interests of mothers and infants belonging to the Borough, namely, St. Paul's Eye Hospital, Birkenhead Day Nursery, Birkenhead and District Rescue Association, The Birkenhead Branch of the Invalid Children's Association, and The Birkenhead Maternity Hospital.

The infant welfare clinics are held at Hamilton Square, Brassey Street, and St. Paul's Road. The Hamilton Square clinic was opened in 1916; the present year saw the opening of the other two clinics—that at Brassey Street being formally opened in June, 1919, and the St. Paul's Road clinic in September, 1919.

The arrangements for home nursing came into force on 1st July, 1919. An agreement between the Corporation and the Birkenhead District Nursing Society provides for the nursing at home of cases of ophthalmia neonatorum; of measles, whooping cough, epidemic diarrhoea, and poliomyelitis in children under the age of five years; and of illnesses of women associated with pregnancy and confinement.

**Staff.**—In addition to the Medical Officer of Health as principal administrative medical officer, the medical staff engaged on maternity and child welfare work during the year consisted of Dr. Dalzell, who was engaged at the Hamilton Square centre throughout the year up till October 31st; and Dr. Brewer, who has carried on the Brassey Street and St. Paul's Road clinics, and (since 3rd November) the Hamilton Square clinic.

The nursing staff consisted of:—

- 1 Charge nurse (superintendent health visitor)
- 1 Woman inspector of midwives
- 1 Clinic nurse and health visitor
- 4 Women health visitors.

## **INSPECTION AND SUPERVISION OF MIDWIVES.**

Work under this section is concerned with the administration of the Midwives' Acts, 1902 and 1918; the visiting of the homes of midwives, inspecting their instruments, etc., advising them on the details of their work and on their duties as set out in the above Acts, and in the rules issued by the Central Midwives' Board.

**Number of midwives.**—During the year 1919, 79 midwives entered their names on the local register as practising in the Borough. Of these, 6 subsequently left the district, and their names have been removed from the register accordingly. One midwife gave notice of change of address, and one had her name removed from the roll at her own request. No Birkenhead midwives died during the year.

Of the 79 midwives, 66 were trained and 13 untrained.

**Number of cases attended by midwives.**—The cases attended by midwives alone (no doctor being in attendance) numbered 2,759; approximately three-quarters of the total births in the Borough.

**Visits of inspection.**—The inspector of midwives paid 235 visits of inspection; in a certain number of cases registers, instruments, etc., were also seen by the Medical Officer.

**Complaints against midwives.**—Complaints against midwives received numbered 3. These were investigated, 2 of the midwives being interviewed by the Medical Officer.

In 9 other instances where no complaints had been received midwives were interviewed by the inspector with regard to delinquencies or failure to observe duties.

**Suspension from practice.**—One midwife was suspended from practice temporarily owing to infectious disease in her residence.

**Cases requiring medical help.**—464 cases were notified by midwives in which medical aid had been called in, as against 370 last year.

## **HOME VISITING OF EXPECTANT MOTHERS, MOTHERS, AND YOUNG CHILDREN.**

**Home visiting.**—The following is a summary of the visits paid by the health visitors in connection with expectant mothers, mothers, and young children:—

- 2881 routine first visits were paid to infants
- 7473 routine revisits were paid to infants under one year
- 4449 routine visits were paid to children over 1 year and under 5 years old.
- 294 visits were paid in connection with cases of measles
- 30 cases of ophthalmia neonatorum were visited and kept under supervision; recovery resulted in each case.
- 29 cases where death had occurred from diarrhœa were investigated
- 29 first visits were paid to expectant mothers
- 53 revisits were paid to expectant mothers.

**Cases reported for special action.**—The following cases after being visited were reported for special action:—

- 49 cases of sanitary defects in houses were passed to the Chief Sanitary Inspector
- 2 cases were referred to the Charity Organisation Society
- 8 cases were reported to the Society for the Prevention of Cruelty to Children
- 11 cases were referred to the Invalid Children's Association
- 1 case was referred to the Naval and Military War Pensions Committee.

### INFANT WELFARE CLINICS.

At the end of the year the clinics were being held as follows:—

- Hamilton Square clinic: Monday and Wednesday afternoons, 2 to 5 p.m.
- Brassey Street clinic: Thursday afternoon, 2 to 5 p.m.
- St. Paul's Road clinic: Tuesday afternoon, 2 to 5 p.m.

**Attendances.**—The attendances were as follows:—

- (a) Expectant mothers: 58 first visits, 68 revisits.
- (b) Mothers attending with regard to post-natal trouble: 210 first visits, 359 revisits.
- (c) Infants: 1006 first visits, 3298 revisits (181 infants received treatment at the clinics).

The average attendance per session at the three clinics was:—

Hamilton Square:	
Expectant mothers .....	9
Infants .....	40
Brassey Street:	
Infants .....	71
St. Paul's Road:	
Infants .....	74

**Supply of milk.**—Dried milk was sold at the clinics to suitable cases.

Supplies of milk were given free under the Milk (Mothers and Children) Order, 1918, to:—

- 3 Expectant mothers.
- 36 Nursing mothers.
- 17 Children.

## **OTHER PROVISION MADE BY THE LOCAL AUTHORITY.**

**Cases dealt with at Borough Hospital.**—During the year, under the Corporation's agreement, 80 cases were dealt with at the Borough Hospital; 8 women and 72 children.

**Cases dealt with at Leasowe Hospital.**—The three beds reserved by the Corporation at Leasowe Hospital were in continuous occupation throughout the year.

**Cases dealt with by the Birkenhead District Nursing Society.**—Several cases were dealt with by this society on behalf of the Corporation during the last six months of the year.

**Cases of confinement attended by medical practitioners.**—In two cases where doctors were called in to difficult cases of confinement the doctors' fees were paid by the Corporation under the provisions of the Midwives' Act, 1918.

The circumstances necessitating a doctor's attendance in these cases were:—

1. Mother recently operated on for hernia.
2. Mother suffering from prolapsus uteri.

In both cases, owing to the nature of the home circumstances, the whole of the medical fee was paid by the local authority.

## **AGENCIES ASSISTED BY THE LOCAL AUTHORITY.**

The Corporation gives financial support to certain other institutions, etc., for general services rendered in connection with maternity and child welfare work.

1. **Birkenhead Maternity Hospital.**—Here 15 beds are provided for maternity cases, but no beds are specially set apart for patients sent from this department. Under the direction of the Hospital Committee a clinic for mothers and babies is held at Grange Mount, Birkenhead.
2. **St. Paul's Eye Hospital, Liverpool.**—Cases of ophthalmia neonatorum are treated at this hospital. During the year



seven infants suffering from ophthalmia neonatorum were admitted to this hospital; and two infants were treated as out-patients.

3. **Birkenhead Day Nursery.**—Here accommodation is provided for 24 day children and 3 boarders.
4. **Invalid Children's Association.**—Arrangements are made by this association to send children to convalescent homes, and to provide massage treatment for cases of infantile paralysis, etc.
5. **Birkenhead and District Rescue Association.**—This association provides 34 beds at St. Faith's Home for unmarried mothers and their children—20 beds for babies and 14 for mothers.

The grants made by the Corporation to the above agencies for the current financial year were as follows:—

Birkenhead Maternity Hospital .....	£200
St. Paul's Eye Hospital.....	30
Birkenhead Day Nursery .....	75
Invalid Children's Association .....	30
Birkenhead and District Rescue Association ...	30
	<hr/>
	£365
	<hr/>

### **AGENCIES NOT PROVIDED OR ASSISTED BY THE LOCAL AUTHORITY.**

Other agencies whose work in Birkenhead touches the welfare of mothers and infants, but which are not provided or assisted by the Birkenhead Corporation, are the following:—

- The Birkenhead Union.
- The Birkenhead and Wirral Children's Hospital.
- The Charity Organisation Society.
- The Society for the Prevention of Cruelty to Children.
- The Naval and Military War Pensions Committee.



# HEALTH OF SCHOOL CHILDREN

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## A—STAFF, GENERAL ARRANGEMENTS, etc.

### STAFF.

Dr. Hastings Smythe, Assistant Medical Officer, who had been absent serving with the colours, returned in February, 1920. Dr. Irene Bateman, Assistant Medical Officer, resigned early in the year and terminated her duties in June; and Dr. Mary A. S. Deacon was appointed to the staff and took up her duties in October.

Dr. Grimshaw continued to act in an honorary capacity as oculist during the whole of the year.

A number of changes occurred on the nursing staff, but the work went on without interruption.

### NUMBER OF ELEMENTARY SCHOOLS AND SCHOOL CHILDREN.

The number of Elementary Schools in the Borough is:

Council Schools .....	15
Voluntary Schools .....	20 Total 35.

The recognised accommodation of these Schools on the 31st December, 1919, was:

Council Schools .....	12,238
Voluntary Schools .....	13,200 Total 25,438

The average number of scholars on the rolls during the year was:

Council Schools .....	10,556
Voluntary Schools .....	14,212 Total 24,768

The average attendance was:

Council Schools .....	9,146
Voluntary Schools .....	11,840 Total 20,986

### EXTENSION OF THE SCOPE OF MEDICAL INSPECTION TO SECONDARY SCHOOLS, ETC.

The Education Act, 1918, extended the scope of the work of school medical inspection, treatment, and supervision to secondary schools, continuation schools, etc. Section 18 of this Act provides:—

(1.) The local education authority for the purposes of Part II. of the Education Act, 1902, shall have the same duties and powers with reference to making provision for the medical inspection and treatment of children and young persons attending—

(1) secondary Schools provided by them;

(2) any School to the governing body of which, in pursuance of any scheme made under the Welsh Intermediate Education Act, 1889, any payments are made out of any general fund administered by a local education authority as a



governing body under that Act, and any School of which a local education authority are the governing body under that Act ;

- (3) continuation Schools under their direction and control ;
- (4) such other Schools or Educational Institutions (not being Elementary Schools) provided by them as the Board direct ;

as a local education authority for the purposes of Part III. of the Education Act, 1902, have under paragraph (b) of subsection (1) of section 13 of the Education (Administrative Provisions) Act, 1907, with reference to children attending Public Elementary Schools, and may exercise the like powers as respects children and young persons attending any school or educational institution, whether aided by them or not, if so requested by or on behalf of the persons having the management thereof.

- (2.) The Local Education Authorities (Medical Treatment) Act, 1909, shall apply where any medical treatment is given in pursuance of this section as it applies to treatment given in pursuance of section 13 of the Education (Administrative Provisions) Act, 1907.

The provisions of this section (except in so far as they impose a duty) were brought into operation in August, 1918, immediately after the passing of the Act. (The Board have since made an Order fixing 1st April, 1920, as the appointed day on which the section will be brought into full operation.)

#### GENERAL NOTES ON THE YEAR'S WORK.

The year under review saw an important extension of the work of medical care in Birkenhead.

This was the introduction of a new age-group for " routine " medical inspection—children reaching the age of eight during the year. Children in this group are known for the purpose of medical inspection as " intermediates."

The work of routine medical inspection, which has been carried out on similar lines to those followed in previous years, has thus been extended in scope to include the examination of :—

- (a) " Entrants "—all admissions to infants' schools and all children in such schools not previously examined.
- (b) " Intermediates "—children reaching the age of eight during the year.
- (c) " Leavers "—children in senior schools reaching the age of twelve during the year.

The special medical inspections dealt with the following groups :—

- (a) Children suspected of mental defects ;

- (b) Children for whom exemption from school attendance was claimed ;
- (c) Children in any of the schools whose physical condition called for special care ;
- (d) Children awarded scholarships to secondary schools, bursars, and student teachers.

In addition special attention has been given to :—

- (a) The re-examination of children found defective at previous school inspections, to ascertain the present condition and the results of treatment where such had been given.
- (b) School visitation to inspect for cleanliness.

## B—INSPECTION.

### CHILDREN INSPECTED.

The following children were medically inspected during the year :—

1. At Routine Inspections .....	9139
2. At Special Inspections in the ordinary schools .....	278
3. As entrants to the Higher Elementary School, the Institute for Boys, and the Girls' Secondary School .....	289
4. As entrants to the Claughton Road Special School for Mental Defectives .....	58
5. As candidates for bursarships and Student-Teacherships....	30
Total .....	<u>9794</u>

In addition to the above, many children were examined at the Clinic as special cases but no record is available of the number so dealt with.

(See Tables S 12 and S 13.)

The numbers examined in each school are given in Table S 10.

### RE-EXAMINATION OF DEFECTIVE CHILDREN.

During the year 485 children who at a previous examination had been found to require medical care were re-examined by the Assistant Medical Officers.

### ATTENDANCE OF PARENTS.

Parents attended at the examination of 4,513 (49·2%) of the 9,139 children dealt with at routine inspection ; and 217 (74·7%) of the 289 entrants to secondary schools.

### VACCINATION.

In the ordinary inspections children were examined as to vaccination marks. Of the 9,139 children examined :—

1405 (15·4%) showed no marks.
3133 (34·3%) showed one mark.
1135 (12·4%) showed two marks.
622 (6·8%) showed three marks.
2844 (31·1%) showed four or more marks.

## HEIGHT AND WEIGHT.

Particulars of the average height and weight of the children examined are set out in Table S 8.

## INFECTIOUS DISEASES.

Enquiry was made at each inspection as to the infectious diseases from which the children had suffered in the past. The information elicited is summarised in Table S 9.

## DEFECTS FOUND REQUIRING TREATMENT.

The number of children referred for treatment as the result of medical inspection was as follows:—

	Code Group.	Special Cases.
<b>SKIN CONDITIONS.</b>		
Pediculosis .....	439	25
Ringworm .....	18	1
Scabies .....	33	6
Impetigo .....	6	4
Other Diseases .....	33	—
<b>EYE DEFECTS.</b>		
Defective Vision and Squint (further details see Table S 6)	745	174
External Eye Disease .....	62	17
<b>EAR DEFECTS.</b>		
Defective Hearing .....	20	5
Ear Disease .....	119	16
<b>TEETH DEFECTS (for further details see Table S 7) .....</b>	<b>976</b>	<b>2</b>
<b>NOSE AND THROAT DEFECTS.</b>		
Enlarged Tonsils .....	498	13
Adenoids .....	118	14
<b>NON-PULMONARY TUBERCULOSIS.</b>		
Glands .....	33	1
<b>OTHER DEFECTS OR DISEASES .....</b>	<b>336</b>	<b>—</b>

A full statement regarding the defects found setting out the number of defective children is given in Table S 3. In Table S 10 the defective children are classified according to the schools attended.

## C—TREATMENT.

### “FOLLOWING UP” OF CASES FOUND ON INSPECTION TO REQUIRE TREATMENT.

Below is a statement of the work done by the nurses in connection with “following up” cases:—

Number of visits to School Departments .....	230
Number of Cases re-examined in the Schools by the Nurses .....	3540
Number of home visits and re-visits made by the Nurses .....	6409
Number of Cases found treated .....	3277
Number of half-days spent on the district .....	614

### TREATMENT OF CHILDREN FOUND, AT MEDICAL INSPECTIONS HELD DURING 1919, TO BE SUFFERING FROM DEFECTS WHICH REQUIRED MEDICAL ATTENTION.

As has been stated above, 3,241 out of the 9,419 children examined at routine or special inspections in Elementary Schools during 1919



were found to be suffering from defects requiring medical attention ; of this 3,241, 2124 or 65 5% received treatment before the end of the year.

#### TREATMENT CARRIED OUT AT MINOR AILMENTS CLINIC.

At this Clinic treatment is given for such defects as otorrhœa, external eye disease, impetigo, scabies, ringworm, etc.

Ringworm of the scalp received special attention, 74 cases being dealt with, all of these making daily attendances in the early stages of the disease. Of these 58 were discharged cured, leaving 16 on the register at the end of the year.

The scheme for the treatment of cases of malnutrition, etc., was continued. Emulsion, malt extract, simple tonics, etc., were purchased from a wholesale chemist and sold to patients at cost price, sales books being kept and duly audited. The patients attended once a week for the medicines, and a record of weight and progress was kept in each case on a separate supervision card. Many of the parents have expressed gratitude for the opportunity thus afforded, and the results obtained have been most satisfactory. Cases treated included tuberculosis, rickets, malnutrition, anæmia, debility after influenza, bronchitis, and convalescence after infectious diseases, and many minor debilitating ailments. This work has been carried out in co-operation with the Tuberculosis Clinic in this department, the local War Pensions Committee, and the Birkenhead Branch of the Liverpool Invalid Children's Association ; many of our children have been passed on to this last Society, after treatment, for a stay in a Convalescent Home.

#### TREATMENT CARRIED OUT AT EYE CLINIC.

The work of the Eye Clinic was carried out during the year, as in 1918, by Dr. Grimshaw, acting in an honorary capacity. Cases selected for examination by the Medical Inspectors were seen by Dr. Grimshaw, and glasses were prescribed for suitable cases. These were fitted at a later session ; and an endeavour was made so far as time would allow to provide for the re-inspection of cases after a few months to check the results of treatment. This re-examination must be regarded as an essential part of the work of an Eye Clinic, and will be arranged for in connection with all cases seen in 1920.

During the year 576 cases were examined and 548 children provided with spectacles. These spectacles were supplied by the Committee at a cost of £143 17s. 6d., of which no less than £132 3s. 9d. has been recovered from the parents. There were also 458 re-examinations.

Dr. Grimshaw has kindly prepared for me a valuable report on his work at the Clinic during the past two years. The following is a summary of the condition of the eyes for which spectacles were prescribed during this period :—

#### HYPERMETROPIA.

Both eyes .....	323
Right eye .....	48
Left eye .....	37

## SIMPLE HYPERMETROPIC ASTIGMATISM.

Both eyes .....	107
Right eye .....	19
Left eye .....	29

## COMPOUND HYPERMETROPIC ASTIGMATISM.

Both eyes .....	155
Right eye .....	28
Left eye .....	40

## MYOPIA.

Both eyes .....	76
Right eye .....	6
Left eye .....	11

## SIMPLE MYOPIC ASTIGMATISM.

Both eyes .....	43
Right eye .....	10
Left eye .....	12

## COMPOUND MYOPIC ASTIGMATISM.

Both eyes .....	45
Right eye .....	11
Left eye .....	10

## MIXED ASTIGMATISM.

Both eyes .....	38
Right eye .....	8
Left eye .....	6

Total number of cases of Hypermetropia (Simple and Astigmatic).... 786

Total number of cases of Myopia (Simple and Astigmatic)..... 224

Total number of cases of Mixed Astigmatism ..... 52

Total number of cases of Isometropia (equal defect) ..... 787

Total number of cases of Anisometropia (unequal defect) ..... 275

Many cases of eye disease and congenital defect were seen. The following may be referred to :—

## OBSTRUCTIVE BLINDNESS.

Corneal ulcer: marked cases (five of these were the result of Ophthalmia Neonatorum. Many cases of corneal ulceration in a minor degree were also seen) .....	20
Congenital syphilitic disease of cornea .....	7
Iritis .....	2
Cataract: Cases which had been operated on .....	2
Cases requiring operation .....	5
Infantile cataract .....	4
Congenital dislocation of the lens (three of these cases were members of one family—an interesting example of hereditary tendency) .	5

## NERVE BLINDNESS.

Optic Atrophy .....	2
Disease of retina and Choroid :	
Specific disease .....	2
Disseminated choroiditis .....	10
Disease of macula (one case each of inflammation, obsolescent tubercle, and congenital defect) .....	3
Coloboma of choroid (combined in all cases with coloboma of iris and in one case with coloboma of the optic nerve—a very rare defect) .....	4

## EYE STRAIN AND SQUINT.

Among the cases referred to above for which spectacles were prescribed there were the following cases of squint :—

Convergent (Internal) Squint :—	
Constant : Right eye .....	90
Left eye .....	151
Alternating .....	45
Occasional : several cases ; records not kept.	
Divergent (External) Squint :—	
Right Eye .....	10
Left eye .....	3

During the two years an average number of 30 cases of convergent squint have been attending the Eye Clinic under Dr. Grimshaw's continuous supervision for checking the sight and balancing the two eyes. The better class or more intelligent parent has also been advised to buy a stereoscope with pictures specially devised for the purpose of rousing the dormant fusion faculty to achieve binocular or stereoscopic vision.

It is highly important, however, that stereoscopic exercises should be carried out at the Clinic in connection with suitable cases. For this purpose an amblyoscope is necessary and it is hoped will shortly be added to the Clinic's equipment. With this form of treatment available early operative interference for squint would be required in only a fraction of the cases where it is now called for.

Dr. Grimshaw in his report calls attention to the widespread extent to which unqualified prescribing for eye defects is carried on by opticians and others. There is no doubt that a great amount of irretrievable harm is done in this way and that the remedy lies in the provision of greater facilities for obtaining skilled treatment and in the better education of public opinion.

## D—MISCELLANEOUS.

### EXAMINATION OF ENTRANTS TO THE BIRKENHEAD INSTITUTE, THE HIGHER ELEMENTARY SCHOOL, AND THE GIRLS' SECONDARY SCHOOL.

During the year 289 children were examined with a view to their admission to the above Schools. Parents attended in 217 cases ; 111 children were found to require treatment for 123 defects, the latter being as follows :—

Defective teeth .. .. .	82
Enlarged tonsils .. . . .	7
Adenoids .. .. .	1
Eye defects .. .. .	27
Pediculosis .. .. .	3
Other Defects .. .. .	3

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### THE SPECIAL SCHOOL FOR MENTALLY DEFECTIVE CHILDREN.

The accommodation at the Special School for the year 1919 was 130. The average number on the rolls during the year was 124, and the average daily attendance 94.2.

Compared with last year there are 2 children less on the rolls, and the average attendance shows a decrease of .8.

Seventeen visits were paid to the school during the year by the Medical Inspector, At these examinations were held of children suspected to be mentally deficient, with reference to their suitability of admission to the Special School. The results were as follows :—

Total number examined—Boys .....	35	..
Girls .....	23	
	—	58
Number certified for admission—Boys.....	16	
Girls .....	10	
	—	26
Number not certified for admission—		
(a) Regarded as fit for ordinary school—Boys	16	
Girls	12	
	—	28
(b) Notified to the Local Authority under the		
Mental Deficiency Act—Boys .....	2	
Girls .....	1	
	—	3
(c) Recommended for admission to Blind		
School—Boy .....	1	
	—	1

As it is not possible to admit all the children nominated for the Special School, a careful selection is made from those presenting themselves for examination. Those children who are found capable of profiting from the ordinary instruction of their own school are not admitted, and on the other hand it would be useless to admit ineducable children.

Of the 26 cases certified during the year and examined on the Binet Simon scale, 7 cases were found to be two years below the normal, 15 three years, and 4 were much more than three years. These 4 cases have only been admitted on probation, and if, on re-examination, no progress can be recorded, they will be referred to the Local Authority under the Mental Deficiency Act.

During the year one child attending the Special School died, one was removed from the district, and one left on reaching the age of sixteen.

In addition, 21 children were permitted to leave the school after medical examination, as follows :—

Fit for work.....	13
Ineducable and notified under the Mental Deficiency Act..	3
Ill health .....	1
Sent to Institutions or into charge of Board of Guardians	2
Found fit for ordinary school .....	2
	—
Total .....	21

Of the 13 cases who left to take up work—

- 2 are working in shipyards ;
- 2 „ „ as window cleaners ;
- 2 „ „ „ market gardeners ;
- 3 „ „ „ errand boys ;
- 1 is „ „ a milk boy ;
- 1 „ „ in a laundry.
- 2 are usefully employed at home.



The average age of the children attending the school, and their classification, are shown below :—

CLASS.	BOYS. Average Age.	GIRLS. Average Age.
Class 1—Boys .....	13	..
Class 2—Girls .....	..	13
Class 3—Boys .....	12½	..
Class 4—Boys and Girls.....	11	10½
Class 5—Boys and Girls.....	10	9½
Class 6—Boys and Girls.....	8½	8½

School dinners have been provided throughout the year at a cost to the parent of 3d. per day.

Daily average supplied ..... 55

Total cost for the year. ....£138

The weekly menu was :—

*Monday*....Scotch Broth.

Boiled Suet Pudding.

*Tuesday* ... Irish Stew.

Milk Pudding.

*Wednesday* .Minced Meat, Potatoes, Greens.

Milk Pudding.

*Thursday* .. Irish Stew.

Boiled Sugar Pudding.

*Friday* ....Vegetable Hot Pot.

#### BIRKENHEAD HOLIDAY CAMP.

This camp for boys is organised and run by Mr. A. H Lee, of West Kirby.

The Camp is situated in a field midway between Meliden and Dyserth, and on the main highway of North Wales from Chester to Holyhead. The site is an excellent one ; part of mounds of stone and gravel—the refuse of neighbouring lead-mines and quarries—the remainder being a well-turfed gentle slope, highly suitable as a site for tents.

The selection of children likely to benefit by a holiday in Camp was entrusted to Dr. Smythe who considered the physical needs and social conditions of the children.

Head teachers nominated children who, in their opinion, would benefit by the change, and all of these were examined by Dr. Smythe.

A list of unfit children met with either at the School Clinic or during visits of inspection to the schools was also kept.

The home of each child selected was visited by the School Nurse, and full advice and instructions given in order that the child might be suitably equipped when away.

Great satisfaction was shown by the parents on the children's return at their general improvement, and many visited the Clinic with the children to express their appreciation.



Mr. S. J. Foulkes, the master in charge of the camp, to whom I am indebted for valuable information regarding its management, is strongly convinced of the physical and mental benefit derived by the boys.

#### TIME-TABLE OF WORK AND PLAY.

- 7 a.m. Reveille.
- 7-15. Tent. Bedding and blankets exposed to sun and air.
- 7-30. Toilet. (Washing and brushing.)
- 7-45. Personal Inspection (body cleanliness). Breathing exercises, 3 mins.
- 8. Breakfast.
- 9-30. Tent Inspection. (Beds and blankets examined.)
- 10 to 1. Games or country walk.
- 1. Dinner.
- 1-30 to 2. Rest.
- 2 to 6. Games or country walk.
- 6 p.m. Tea.
- 7 to 8-30. Camp Games, concerts, etc.
- 8-30. Beds down, supper, and prayers.
- 9 p.m. "Lights out."

#### DIETARY.

- Breakfast. Cocoa or tea.  
Bread and butter (or jam).
- Dinner. Meat and potato hash.  
Suet dumplings in soup.  
Occasional puddings (rice and custard).
- Tea. Bread and butter (or jam).  
Cheese or salad (occasionally).
- Supper. Bread and butter.

The boys are taught to live on self-supporting lines, to assist in the preparation and distribution of food, to serve at meal times, and to wash up all dishes, etc., used. Each tent is under a captain who is responsible for the discipline in the tent. At first some of the boys show want of experience in self-management, but they quickly fall into line, and under the influence of routine and regularity of life begin to take a keen and enthusiastic interest in the camp.

The educational or instructional side of the work is to be found in the country walks or outdoor lessons. These include visits to a quarry showing rock formations, collecting and classifying wild flowers, study of bird-life, and observation and naming of trees, etc.

TABLE S 1.

TABLE I.—Shewing the total number of examinations of all kinds made during 1919.

TYPE OF INSPECTION.	Boys.	Girls.	Total.	Total Ordinary Inspections.	Parents Present.	Total Number of Parents Present at Ordinary Exam.
1. ORDINARY ROUTINE INSPECTIONS. (a) Entrants (ages 3—7) .....	1615	1572	3187	9139	2240	4513
(b) Intermediates (ages 7—8) .....	1206	1225	2431		1283	
(c) Leavers (ages 12—14) .....	1805	1716	3521		990	
2. SPECIAL CASES. Selected by the teachers .....	106	174	280	..	..	..
3. RE-EXAMINATIONS. Cases followed up in the schools .....	261	224	485	..	..	..
4. EXAMINATIONS OF ENTRANTS. (a) To the Higher Elementary School (Boys) .....	121	..	121	..	87	..
(b) To the Institute for Boys .....	97	..	97	..	70	..
(c) To the Girls' Secondary School .....	..	71	71	..	60	..
5. EXAMINATION OF CANDIDATES. (a) For Bursarships .....	1	26	27	..	..	..
(b) For Student-Teacherships .....	1	2	3	..	..	..
6. EXAMINATION OF ENTRANTS To the Special School for Mental Defectives .....	35	23	58	..	58	..
Totals .....	5148	5033	10281	9139	4788	4513

TABLE S 2.

Number of Children inspected 1st January, 1919, to 31st December, 1919.

## A—Routine Medical Inspection.\*

Age.	Entrants.					
	3	4	5	6	Other Ages.	Total.
Boys .....	14	308	1023	202	68	1615
Girls .....	6	277	1043	186	60	1572
Totals .....	20	585	2066	388	128	3187

Age.	Inter- mediate Group. 8	Leavers.					Grand Total.
		12	13	14	Other Ages.	Total.	
Boys .....	1206	1564	241	..	..	1805	4626
Girls .....	1225	1489	224	2	1	1716	4513
Total .....	2431	3053	465	2	1	3521	9139

## B—Special Inspections.†

Age.	Special Cases.	Re-Examinations (i.e., No. of Children re-examined).
Boys .....	....	261
Girls .....	....	224
Totals .....	....	485

\* ROUTINE MEDICAL INSPECTION is medical inspection carried out on the lines of the approved Schedule at the time when routine Medical inspection is due, and made on the school premises or other place sanctioned by the Board of Education under the Code.

† SPECIAL CASES are those children specifically referred to the Medical Officer and not due for routine medical inspections under the Code at the time when specially referred. Such children may or may not be of Code-group age and may be referred to the Medical Officer at the school or the Clinic by the Committee, Medical Officer, Nurses, Teachers, Attendance Officers, Parents, or otherwise.

TABLE S 3.

Shewing the physical condition of children examined at  
Routine Medical Inspections during 1919.

(Entrants, Intermediates and Leavers).

	Boys.	Girls.	Total.	%
TOTAL INSPECTED. ....	4626	4513	9139	
CLOTHING AND FOOTGEAR.				
Good .....	3034	3121	6155	67.4
Medium .....	1371	1254	2625	28.7
Bad .....	221	138	359	3.9
CLEANLINESS OF HEAD.				
Clean .....	4577	3503	8080	88.4
Nits only .....	31	931	962	10.6
Pediculi .....	18	79	97	1
CLEANLINESS OF BODY.				
Clean .....	4407	4300	8707	95.3
Dirty .....	188	185	373	4.1
Pediculi .....	31	28	59	.6
NUTRITION.				
Good .....	1559	1573	3132	34.3
Medium .....	2560	2406	4966	54.3
Bad .....	507	534	1041	11.4
NOSE AND THROAT.				
No Defects .....	3742	3637	7379	80.8
Mouth Breathers .....	119	74	193	2.1
Enlarged Tonsils .....	698	740	1438	15.7
Adenoids .....	67	62	129	1.4
EXTERNAL EYE DISEASE.				
No Disease .....	4435	4327	8762	95.9
Blepharitis .....	27	24	51	.5
Conjunctivitis .....	16	15	31	.3
Corneal Opacities .....	9	5	14	.2
Other Disease .....	139	142	281	3.1
TEETH.				
Sound .....	2095	2030	4125	45.1
Less than 5 decayed .....	2096	2132	4228	46.3
Five or more decayed .....	435	351	786	8.6
EAR DISEASE.				
No Disease .....	4461	4390	8851	96.8
Obstruction .....	12	3	15	.2
Defective Hearing .....	57	58	115	1.2
Otorrhœa R. ....	48	32	80	.9
Otorrhœa L. ....	24	18	42	.5
Otorrhœa D. ....	15	11	26	.3
Other Disease .....	9	1	10	.1

TABLE S 3.—*continued.*

	Boys.	Girls.	Total.	%
<b>HEART AND CIRCULATION.</b>				
No Disease.....	4497	4415	8912	97·5
Organic Disease.....	26	23	49	·54
Functional Disease.....	38	21	59	·7
Anæmia.....	62	51	113	1·2
Other Defects.....	3	3	6	·06
<b>LUNGS.</b>				
No Disease.....	4414	4332	8746	95·7
Chronic Bronchitis and Bronchial Catarrh.....	183	155	338	3·7
Tuberculosis.....	2	2	4	·04
Other Disease.....	27	24	51	·56
<b>NERVOUS SYSTEM.</b>				
No Disease.....	4606	4496	9102	99·6
Epilepsy.....	1	..	1	·01
Chorea.....	3	2	5	·05
Other Disease.....	16	15	31	·34
<b>SKIN DISEASES.</b>				
No Disease.....	4537	4436	8973	98·18
Ringworm (Body).....	4	2	6	·06
Do. (Head).....	7	5	12	·13
Impetigo.....	17	16	33	·36
Scabies.....	31	21	52	·57
Other Diseases.....	30	33	63	·7
<b>DEFORMITY.</b>				
No Deformity.....	4575	4466	9041	99
Deformity present.....	51	47	98	1
<b>RICKETS.</b>				
No Disease.....	4580	4488	9068	99·2
Rickets.....	46	25	71	·8
<b>TUBERCULOSIS (NON-PULMONARY)</b>				
No Disease.....	4612	4496	9108	99·66
Glandular.....	7	13	20	·22
Bones and Joints.....	6	1	7	·08
Other Forms.....	1	3	4	·04
<b>SPEECH.</b>				
No Defect.....	4493	4434	8927	97·68
Defective Articulation.....	117	71	188	2·06
Stammering.....	16	8	24	·26



TABLE S 4.  
Treatment of Defects of Children during 1919.

Condition.	No. of Defects found for which Treatment was considered necessary.		No. of Defects for which no Report is available.	No. of Defects treated.	Results of Treatment.		No. of Defects not treated.	Percentage of Defects treated.
	Carried forward from previous Year.	This Year. Total.			Cured.	Under treatment at end of year.		
Cleanliness of Head .....	52	315	367	285	133	152	82	77.6
"  Body .....	38	154	192	159	70	89	33	82.8
Nutrition .....	..	31	31	25	8	17	6	80.6
Nose and Throat.....	257	583	840	355	250	105	485	42.2
External Eye Disease .....	22	91	113	85	54	31	28	75.2
Ear Disease .....	43	133	176	143	91	52	33	81.2
Teeth .....	437	1052	1489	556	469	87	933	37.3
Heart and Circulation .....	10	62	72	55	20	35	17	76.3
Lungs .....	..	77	77	74	45	29	3	98.7
Nervous System .....	1	..	1	..	..	..	1	—
Skin .....	16	87	103	90	68	22	13	87.3
Deformities .....	13	14	27	16	5	11	11	59.2
Tuberculosis, non-Pulmonary ..	2	12	14	13	6	7	1	92.8
Vision and Squint.....	215	1053	1268	784	723	61	484	61.8
Hearing .....	10	29	39	27	18	9	12	69.2
Miscellaneous .....	70	263	333	236	148	88	97	70.8
Totals .....	1186	3956	5142	2903	2108	795	2239	56.4

TABLE S 5.

Inspection, Treatment, Etc., of Children during 1919.

(1) The total number of Children in Elementary Schools medically inspected (whether Code Group, special or ailing child).....	9419
(2) The number of Children in (1) who were referred for treatment (excluding uncleanliness, defective clothing etc.) .....	3241
(3) The number of children in (2) who received treatment for one or more defects (excluding uncleanliness, defective clothing, etc.) .....	2124

TABLE S 6.

Vision amongst Routine Cases examined during 1919.

## BOYS AND GIRLS.

VISION ....	NORMAL					worse than
	6	6	6	6	6	6
	6	9	12	18	24	24
RIGHT EYE	4560	641	249	221	108	173
LEFT EYE..	4397	693	274	243	126	219

Number with both eyes defective .. .. 1115

Children examined .. .. 5952

Percentage with Defective Sight .. .. 30.3

Note.—Entrants were not inspected in regard to vision.

TABLE S 7.

Number of decayed teeth amongst school children examined by the Assistant School Medical Officers during the Year 1919.

	No. Examined.	0	1 to 4	5 to 8	9 or more.	Total No. of Children with Defective Teeth.	Percentage of Children with Defective Teeth.
Entrants—Boys .....	1615	1005	455	124	31	610	37.7
Entrants—Girls .....	1572	963	490	86	33	609	38.7
Intermediates—Boys .....	1206	241	737	180	48	965	80.0
Intermediates—Girls .....	1225	285	768	147	25	940	76.7
Leavers—Boys .....	1805	849	904	49	3	956	53.0
Leavers—Girls .....	1716	782	874	58	2	934	54.4
TOTALS .....	9139	4125	4228	644	142	5014	54.9

TABLE S 8.  
Heights and Weights.

	No. Examined.	AVERAGE HEIGHT.				AVERAGE WEIGHT.		
		Ft.	In.	$\frac{1}{16}$ In.		Stns.	Lbs.	Ozs.
BOYS :—								
Age 4 years.....	308	3	3	6		2	9	1
Age 5 years.....	1023	3	4	12		2	11	0
Age 7—8 years..	1206	3	9	12		3	6	11
Age 12 years....	1564	4	5	12		5	0	8
Age 13 years....	241	4	7	1		5	5	5
GIRLS :—								
Age 4 years.....	277	3	3	1		2	7	7
Age 5 years.....	1043	3	4	4		2	9	8
Age 7—8 years..	1225	3	9	7		3	5	3
Age 12 years....	1489	4	6	0		4	13	13
Age 13 years....	226	4	8	2		5	7	5

TABLE S 9.

## Infectious Diseases.

## (1). Children aged 3—7 (3,187).

	No. of Cases.	Percentage.
No Infectious Disease .....	869	27·3
Measles .....	1895	59·5
Whooping Cough .....	1265	39·7
Scarlet Fever .....	160	5·0
Diphtheria.....	36	1·1
Chicken Pox .....	703	22·1
Mumps .....	264	8·3

## (2). Children aged 8—15 (5,952).

	No. of Cases.	Percentage.
No Infectious Disease .....	457	7·7
Measles .....	5159	86·7
Whooping Cough .....	3385	56·9
Scarlet Fever .....	628	10·6
Diphtheria.....	187	3·1
Chicken Pox .....	2439	41·0
Mumps .....	1184	19·4

NOTE:—The same child may have had more than one of these diseases



TABLE S 10.

Showing the number of children examined at the Routine Inspections in the Schools and the number found defective in each School.

## CLASSIFICATION OF DEFECTS.

SCHOOL.	Entrants.	Intermediate	Leavers.	Total Ordinary Inspections.	Parents Present.	Number of Defective Children.	Number of Defects found	Defective Teeth.	Tonsils and Adenoids.	Defective Hearing and Otorrhoea.	Defective Sight.	Conjunctivitis and Blepharitis.	Chest Affections.	Heart Affections.	Skin Diseases Ringworm, Scabies, Impetigo.	Rickets, Aneurysm, Malnutrition, Delicate.	Other Defects.
Brassey Street.....	113	113	164	390	192	125	205	33	50	19	34	6	27	7	7	8	14
Cathart Street .....	108	111	135	354	190	111	188	35	50	10	35	6	18	3	3	9	19
Hemingford Street .....	112	93	117	322	191	106	178	30	63	7	36	3	16	2	6	3	12
Laird Street.....	109	111	114	334	164	102	174	37	66	11	15	2	7	8	6	8	14
Mersey Park .....	145	82	119	346	181	120	206	53	73	5	26	..	11	14	6	7	11
Rock Ferry .....	139	68	150	357	169	104	174	24	44	10	38	3	22	2	11	7	13
Temple Road .....	73	28	48	149	83	37	79	24	33	3	4	1	7	4	2	1	..
The Woodlands.....	139	117	172	428	208	155	266	61	87	14	29	..	25	10	13	11	16
Well Lane .....	129	95	197	421	226	114	233	60	73	9	41	2	16	10	7	8	7
Woodchurch Road .....	94	76	173	343	192	101	185	51	58	9	23	3	10	11	1	10	9
Park Road Temp. ....	80	54	..	134	82	31	91	4	46	7	9	2	6	3	6	2	6
Cleveland St. " .....	63	39	..	102	62	37	62	10	19	6	5	..	6	2	5	3	6
Price Street " .....	..	25	75	100	29	41	70	11	25	5	14	1	5	..	2	2	5
Claughton H.G. ....	122	112	135	369	222	106	219	41	87	10	38	2	10	10	5	10	6
Claughton Village .....	47	21	..	68	53	14	20	7	8	..	..	..	4	..	..	..	1
Holy Trinity .....	120	68	124	312	152	92	159	19	47	11	31	4	11	5	7	10	14

Our Lady's .....	124	95	148	367	139	128	175	33	49	13	40	—	17	1	6	3	13
Oxton .....	49	20	40	109	47	40	68	19	18	..	10	1	4	10	..	4	2
Rock Ferry H.G. ....	122	95	107	324	192	85	176	26	77	9	24	4	8	9	4	9	6
St. Andrew's, Conway St...	38	32	33	103	61	42	56	17	16	7	7	..	3	..	1	..	5
St. Anne's .....	105	83	110	298	128	108	162	38	37	9	33	5	15	1	5	9	10
St. Anne's R.C. ....	83	67	113	263	115	82	134	21	45	8	31	3	10	5	2	3	6
St. Catherine's .....	113	69	113	295	132	92	167	24	57	8	25	5	12	6	7	4	19
St. James' .....	55	55	79	189	87	63	92	25	28	7	17	1	7	..	1	..	6
St. John's .....	130	88	134	352	153	126	207	40	61	14	31	..	15	5	10	11	20
St. Joseph's .....	45	19	36	100	41	30	55	13	16	3	8	1	4	3	4	2	1
St. Laurence's .....	123	148	190	461	248	181	280	46	74	11	49	6	26	7	14	12	35
St. Luke's .....	110	85	132	327	175	80	173	40	58	8	20	2	19	6	4	9	7
St. Mary's .....	102	91	120	313	103	112	161	37	41	13	30	5	13	1	4	7	10
St. Paul's .....	108	52	104	264	127	76	120	21	30	7	28	4	11	2	5	7	5
St. Peter's .....	131	118	143	392	175	142	206	38	52	18	50	7	14	6	5	4	12
St. Werburgh's .....	116	69	126	311	120	135	198	46	51	16	39	3	13	4	7	10	9
Tranmere H.G. ....	40	32	70	142	74	43	69	22	28	1	12	..	1	3	..	..	2
Combined Totals .....	3187	2431	3521	9139	4513	2961	5008	1006	1567	288	832	82	393	160	166	193	321

† The number of defects found is in excess of the number of defective children, as one child may have several defects.

TABLE S 11.

Numerical Return of all Exceptional Children in the Area in 1919,  
so far as known.

			Boys	Girls	Total
BLIND (including partially blind)		Attending Public Elementary Schools .....	..	..	..
		Attending Certified Schools for the Blind .....	1	5	6
		Not at School .....	..	..	..
DEAF AND DUMB (including partially deaf)		Attending Public Elementary Schools .....	..	..	..
		Attending Certified Schools for the Deaf .....	6	4	10
		Not at School .....	..	..	..
MENTALLY DEFICIENT.	Feeble-Minded	Attending Public Elementary Schools .....	..	..	..
		Attending Certified Schools for Mentally Defective Children .....	79	45	124
		Notified to the Local (Control) Authority during the Year .....	4	2	6
		Not at School .....	..	..	..
	Imbeciles	At School .....	..	..	..
		Not at School .....	..	..	..
	Idiots	.....	..	..	..
EPILEPTICS.		Attending Public Elementary Schools .....	..	..	..
		Attending Certified Schools for Epileptics .....	..	1	1
		Not at School .....	..	..	..
PHYSICALLY DEFECTIVE	*Pulmonary Tuberculosis	Attending Public Elementary Schools .....	..	..	..
		Attending Certified Schools for Physically Defective Children .....	..	..	..
		Not at School .....	..	..	..
	*Other forms of Tuberculosis	Attending Public Elementary Schools .....	..	..	..
		Attending Certified Schools for Physically Defective Children .....	..	..	..
		Not at School .....	..	..	..

\* Accurate returns for Pulmonary and non-Pulmonary Tuberculosis in Children of the ages 5 to 14 are not available for the past year.

TABLE S 12.

Shewing the cases treated at the Minor Ailments Clinic.

	Jan. 1 to March 31	April 1 to June 30	July 1 to Sept. 30	Oct. 1 to Dec. 31	Total.
Total number of children treated	1019	1111	734	1421	4285
Total number of attendances .....	3687	3254	2280	3291	12512
Total number cured	432	350	322	584	1688
New cases .....	723	585	520	737	2565

TABLE S 13.

Showing the Defects Dealt with at the Minor Ailments Clinic Month by Month.

Month.	NUMBER OF ATTENDANCES FOR TREATMENT.										RESULTS.		No. of New Cases.		
	Ringworm.	Verrinous Condition.	Dirty Head.	Impetigo.	Scabies.	Malnutrition and Tuberculous and Delicate.	Eyes.	Ears.	Other Defects.	Total No. of Attendances.	No. of Attendances for Treatment only.	Attendances for Inspection.		No. Improved and fit for School.	No. Cured.
January ..	304	1	3	241	64	6	144	188	334	1285	1018	267	75	176	240
February .	177	2	..	114	67	12	179	247	377	1175	929	246	19	114	220
March ....	174	2	2	102	63	11	196	314	363	1227	974	253	16	142	263
April .....	62	2	4	53	33	6	116	197	156	629	528	101	10	75	125
May .....	145	2	..	107	62	10	287	401	406	1420	1199	221	30	167	278
June .....	87	1	3	104	49	17	357	321	266	1205	972	233	6	108	182
July .....	72	1	..	29	35	1	137	145	70	490	401	89	1	17	45
August ...	86	1	2	59	23	9	98	67	130	475	288	187	8	75	117
September	111	3	18	155	76	12	384	108	448	1315	901	414	32	230	358
October ..	89	7	1	190	107	10	355	152	393	1304	848	456	16	222	312
November.	96	7	..	91	62	17	238	220	494	1225	855	370	31	215	272
December	86	..	2	56	28	6	162	164	258	762	514	248	14	147	153
Totals ..	1489	29	35	1301	669	117	2653	2524	3695	12512	9427	3085	258	1688	2565



